SIEMENS

UROSKOP D

SP

Troubleshooting Instructions

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Overview of the M20 boards

Board	Function	Note on board replacement:
D1	Host	Download of the software (UROS.HEX) Firmware J14; J43; J52; J65; J75. Boot software J66; J67. PAL J64. Jumpers and DIP switches see wiring diagram page 51.
D2	XCS controller	Firmware, Jumpers and DIP switches see wiring diagram page 52.
D3	Collimator control console controller	Firmware Wiring diagram page 53
D3A	IR receiver	Jumpers X1 and X2 Wiring diagram page 53A
D4	ADO board	Firmware, see wiring diagram page 54.
D5	Motor controller	Firmware, Jumpers and DIP switches see wiring diagram page 55
D6	COM controller	Firmware, Jumpers X4 and X9 see wiring diagram page 56.
D7	Spotfilm device controller	Firmware, Jumpers X3, X4, X5 see wiring diagram page 57.
D20A-C	Motor power board	Replacement without additional work

Board	Function	Note on board replacement:
D21	Power supply unit +15/+26V	Measure voltage at X2 - +15V X3 - GND X4 - +26V X5 - GND.
D25	Power supply unit +5V/12A	Measure voltage at D25 / B2 - B12. See wiring diagram page 11.
D30	System coupler	Firmware: Jumpers see wiring diagram page 70.
D50	Spotfilm device interface	Replacement without additional work.
D51a-d	Light barrier transmitter 1	Perform "Adjustment of cassette drive" in the service program.
D52	Light barrier transmitter 2	Perform "Adjustment of cassette drive" in the service program.
D53a-e	Light barrier receiver	Perform "Adjustment of cassette drive" in the service program.
D102	Encoder driver	Replacement without additional work.
D103	Encoder driver	Replacement without additional work.
D107	Encoder driver	Replacement without additional work.
D130	Table-side control	Firmware.
D1	Control console controller	Firmware, DIP switches wiring diagram page 91.
D2	Keyboard of the main control console	Only complete replacement, no additional work required.

Structure of the error listing

The errors detected by the host are:

1.) displayed as flashing, 4-digit hex number on the host board D1 in the control rack M20.

2.) displayed as 3-digit group display on the main control console in the area dose indicator field visible for the customer (e.g. U01).
With built-in Diamentor (UROSKOP D2/D3), an alternating display of dose and error message is implemented.

Whereby **U** - is a status message for the user.

E - is an error, i.e. only part functions are disabled (movement, **or** radiation release **or** communication)

F - is a fatal error, i.e. the system is disabled completely (movement **and** radiation release **and** communication)

3.) entered in the short-time error memory of the UROSKOP, transferred into the long-time error memory after 1 minute or after shutting down the system.

The error entry contains the 4-digit hex number, initials of the component which has reported the error, a single-line short description of the error, the date and the time.

e.g. Error number: # 50H Date: 21.04.93 Time: 06:34
Emergency stop switch pressed

or Error number: # B018H Date: 23.04.93 Time: 15:07
Spotfilm device: Direct exposure without free cassette

Only the service engineer can delete the long-time error memory with the service PC. (See UROSKOP D SSW description.)

Errors which cannot be processed by the customer service are identified with the remark "**int. SW Error**".

These errors generally have no influence on the operation of the system.

Error groups for console display on UROSKOP D1, UROSKOP D2 and UROSKOP D3 with SU

	Status messages for user	
U01	Emergency stop switch or safety limit switch activated	0050
U02	Safety function "Collision protection" actuated. *1)	0110
U03	Safety blocking of lift, tilt, column drives actuated. *1)	0112
U04	Safety blocking of all basic unit drives actuated. *1)	0113
U05	Exposure or fluoro footswitch actuated during init phase	6170

*1) only if present and parameterized

	Errors of voltage supplies and safety contactors	
F02	Main contactor K1 does not open or close	0017, 0027, 0063, 0064
F03	Spotfilm device contactor K2 does not open or close	0012, 0022, 0061, 0066
F04	No voltage supply for tablemotors	0070, 0071
F05	No voltage supply for spotfilm device motors	0072
F06	No voltage supply for serial interface	0073
F07	No voltage supply for contactors	0074
F08	No voltage for light barriers or switches (15 V)	0075
F09	No voltage for brakes and relays (26 V)	0076

	System software error or error on host board D1	
F10	System software error	0F00, 1000, 1003, F811
F11	Software error: watchdog is not retriggered	F100, F200, F201
F12	Incorrect data in EEPROM	F80E
F15	Error real-time clock	1004, 1005
F16	Hardware error on D1	F800 ---> F80D, F80F

	Errors of collimator and operation controller D3 (BBC) to the control-units	
F30	Communication to control master (DUEP on D3) not possible or interrupted	6104, 6124, 6134
E31	Main control M30A does not respond	D200
E32	Main control M30B does not respond	D201
E33	IR-receiver (D3A) not available	D20D
F34	IR-footswitch is reporting activation already during Initialization phase	D300
F35	IR-receiver (D3A) or IR-footswitch defective (different or invalid data)	D301
E36	IR-footswitch receiving error (10x)	D303

	ADO board D4 and position errors of the tabledrives	
F40	Error A/D converter on D4	0080, 0090, 4170, 4171, 4172, 4173
E41	Position error lift drive (potentiometer, parameter)	4140, 4180, 4190, 41B0, 41F0, 42B0
E42	Position error tilt drive (potentiometer, parameter)	4141, 4181, 4191, 41B2, 41F1, 42B1
E43	Position error tabletop longitudinal drive (potentiometer, parameter)	4142, 4182, 4192, 41B2, 41F2, 42B2,
E44	Position error tubearm drive (potentiometer, parameter)	4143, 4183, 4193, 41B3, 41F3, 42B3
E45	Positionswitch error tabletop transverse drive	41F4

	Table drive errors and errors of the motor controller D5	
E50	No comunication to motor controller D5 or communication interrupted	6100, 6120, 6130
F50	Motor controller D5 defective	4130, 42A0, 42A1, 42A2, 42A3
E51	Table lift drive error	4260, 4270
F51	Fatal error table lift drive	4250, 4280, 4290
E52	Table tilt drive error	4261, 4271
F52	Fatal error table tilt drive	4251, 4281, 4291
E53	Tabletop longitudinal drive error	4262, 4272
F53	Fatal error tabletop longitudinal drive	4252, 4282, 4292
E54	Tubearm drive error	4263, 4273
F54	Fatal error tubearm drive	4253, 4283, 4293

	Errors of the system coupler D30 or RAS-G (communication with Polydoros SU)	
E60	Communication Host to generator KK-interface on D30 not possible or interrupted	6105, 6125, 6135
E61	Communication of control interface to the generator (D30 to Polydoros SX) not possible or interrupted	6106, 6126, 6136
E62	No connection to control interface of the generator: D30 <---> Polydoros SU	7011
E63	Connection to control interface of the generator interrupted: D30 <---> Polydoros SU	7012
E64	KK-interface (D30) or RAS-G don't have connection to the generator	910C
E65	Connection KK-interface (D30) or RAS-G to generator interrupted	910D
E66	Uroskop Host locks out generator due to component failure: (collimator, generator interface,main control, KK-interface, RAS)	900C
E67	Interruption of radiation by the spotfilm device (e.g. cassette not in exposure position, clampbars still moving.)	900B
E68	RAS-G reports hardware error of the generator	9101 to 9106
E69	Connection master and slave on RAS-G interrupted	910B

	Spotfilm device controller D7 or spotfilm device errors	
E70	No communication to spotfilm device controller D7 or communication interrupted.	6101, 6121, 6131
F70	Spotfilm device controller D7 defective (LM 628)	B00C, B130, B131, B132
E71	Cassette transport drive error	B110, B120, B140, B150 B160, B170
E72	Cassette clamping drive error	B111, B121, B141, B151, B161
E73	Diaphragm plate drive error	B112, B122, B142, B152 B162, B172
E74	Error reference switch	B181, B182,B 191, B192
E75	Light barrier error	B013 ---> B017
F76	Hardware error: light barriers, reference switch, 15V supply (Spotfilm device operation is not enabled. If a detail error is detected, this is also listed.)	B01C
E77	Cassette size measured wrong	B01A, B01B
E78	Cassette loading error	B012

	Memoskop errors	
F80	No communication to Memoskop or Memoskop interface (D3) or communication interrupted	6103, 6123, 6133, D203, D204
E81	Memoskop: error on D1 board	E101 ---> E104, E108, E109
E82	Memoskop: error on D2 board	E105, E106
E83	Memoskop: error on D2 board or harddisc	E402, E403, E404
E84	Memoskop: error on textcontroller D6	E601, E602
E85	Memoskop: keyboard error	E610, E611, E612, E620, E621
E86	Control error with IDL: "Acquisition" signal from Memoskop does not arrive in time	EF07
E87	Control error with DR: "Acquisition" signal from Memoskop does not arrive in time	EF08
E88	"Acquisition signal" already present before start signal image writing	EF05 or EF06

	Collimator errors	HOST D1 display
F90	No communication to collimator interface (D3) or collimator or communication interrupted	6102, 6122, 6132
F91	Faulty connection to collimator	8007
F92	Collimator hardware error	8301 ---> 8307

Error groups for console display on UROSKOP D1 with LX and UROSKOP D2/D3 with SX

	Status messages for user	Host D1 display
U01	Emergency stop switch or safety limit switch activated	0050
U02	Collission stop switch table down actuated. *1)	0110
U03	Safety blocking of lift, tilt, column drives actuated. *1)	0112
U04	Safety blocking of all basic unit drives actuated. *1)	0113
U05	Exposure or fluoro footswitch actuated during init phase	6170

*1) only if present and parameterized

	Errors of safety contactors and voltage supplies	HOST D1 display
F02	Main contactor K1 does not open or close	0017, 0027, 0063, 0064
F03	Spotfilm device contactor K2 does not open or close	0012, 0022, 0061, 0066
F04	No voltage supply for tablemotors	0070, 0071
F05	No voltage supply for spotfilm device motors	0072
F06	No voltage supply for serial interface	0073
F07	No voltage supply for contactors	0074
F08	No voltage for light barriers or switches (15 V)	0075
F09	No voltage for brakes and relays (26 V)	0076

	XCS Controller D2 and XCU errors	**HOST D1 display** only Uroskop D1
E20	Communication to XCS-controller D2 not available or interrupted	6105, 6125, 6135
E30	Contact to XCU interrupted during operation	9140
E31	XCU is not sending data during system init phase	9150
E32	Init block from XCS received after init phase	9120
E33	X-ray interruption from spotfilm device	900B
E34	No system ready information from XCU (component defective; configuration error ...)	9008

	Errors of collimator and operation controller D3 (BBC) to the control-units	**HOST D1 display** only UROSKOP D2/D3
F30	Communication to control master (DUEP on D3) not possible or interrupted	6104, 6124, 6134
E31	Main control M30A does not respond	D200
E32	Main control M30B does not respond	D201
E33	IR-receiver (D3A) not available	D20D
F34	IR-footswitch is reporting activation already during Initialization phase	D300
F35	IR-receiver (D3A) or IR-footswitch defective (different or invalid data)	D301
E36	IR-footswitch receiving error (10x)	D303

	ADO board D4 and position errors of the table drives	HOST D1 display
F40	Error A/D converter on D4	0080, 0090, 4170, 4171, 4172, 4173
E41	Position error lift drive (potentiometer, parameter)	4140, 4180, 4190, 41B0, 41F0, 42B0
E42	Position error tilt drive (potentiometer, parameter)	4141, 4181, 4191, 41B2, 41F1, 42B1
E43	Position error tabletop longitudinal drive (potentiometer, parameter)	4142, 4182, 4192, 41B2, 41F2, 42B2,
E44	Position error tubearm drive (potentiometer, parameter)	4143, 4183, 4193, 41B3, 41F3, 42B3
E45	Positionswitch error tabletop transverse drive	41F4

	Table drive errors and errors of the motor controller D5	HOST D1 display
E50	No comunication to motor controller D5 or communication interrupted	6100, 6120, 6130
F50	Motor controller D5 defective	4130, 42A0, 42A1, 42A2, 42A3
E51	Table lift drive error	4260, 4270
F51	Fatal error table lift drive	4250, 4280, 4290
E52	Table tilt drive error	4261, 4271
F52	Fatal error table tilt drive	4251, 4281, 4291
E53	Tabletop longitudinal drive error	4262, 4272
F53	Fatal error tabletop longitudinal drive	4252, 4282, 4292
E54	Tubearm drive error	4263, 4273
F54	Fatal error tubearm drive	4253, 4283, 4293

	Errors of the system coupler D30 or RAS-G (communication with Polydoros SU)	**HOST D1 display** only UROSKOP D2/D3
E60	Communication Host to generator KK-interface on D30 not possible or interrupted	6105, 6125, 6135
E61	Communication of control interface to the generator (D30 to Polydoros SX) not possible or interrupted	6106, 6126, 6136
E62	No connection to control interface of the generator: D30 <---> Polydoros SU	7011
E63	Connection to control interface of the generator interrupted: D30 <---> Polydoros SU	7012
E64	KK-interface (D30) or RAS-G don't have connection to the generator	910C
E65	Connection KK-interface (D30) or RAS-G to generator interrupted	910D
E66	Uroskop Host locks out generator due to component failure: (collimator, generator interface,main control, KK-interface, RAS)	900C
E67	Interruption of radiation by the spotfilm device (e.g. cassette not in exposure position, clampbars still moving.)	900B
E68	RAS-G reports hardware error of the generator	9101 to 9106
E69	Connection master and slave on RAS-G interrupted	910B

	Fehler auf Bedienschnittstelle (D6) oder Bedieneinheit	**HOST D1 display** only UROSKOP D1
F60	Communication to control master (DUEP on D6) not possible or interrupted	6104, 6124, 6134
E61	Main control M30A does not respond	D200
E62	Main control M30B does not respond	D201
E63	IR-receiver (D3A) not available	D20D
F64	IR-footswitch is reporting activation already during Initialization phase	D300
F65	IR-receiver (D3A) or IR-footswitch defective (different or invalid data)	D301
E66	IR-footswitch receiving error (10x)	D303

	Spotfilm device controller D7 or spotfilm device errors	HOST D1 display
E70	No communication to spotfilm device controller D7 or communication interrupted.	6101, 6121, 6131
F70	Spotfilm device controller D7 defective (LM 628)	B00C, B130, B131, B132
E71	Cassette transport drive error	B110, B120, B140, B150 B160, B170
E72	Cassette clamping drive error	B111, B121, B141, B151, B161
E73	Diaphragm plate drive error	B112, B122, B142, B152 B162, B172
E74	Error reference switch	B181, B182,B 191, B192
E75	Light barrier error	B013 ---> B017
F76	Hardware error: light barriers, reference switch, 15V supply (Spotfilm device operation is not enabled. If a detail error is detected, this is also listed.)	B01C
E77	Cassette size measured wrong	B01A, B01B
E78	Cassette loading error	B012

	Memoskop errors	HOST D1 display	
		UROSKOP D1	UROSKOP D2/D3
F80	No communication to Memoskop or Memoskop interface (D6) or communication interrupted	6103, 6123, 6133, EF13	6103, 6123, 6133, D203; D204
E81	Memoskop: error on D1 board	E101 to E104, E108	E101 to E104, E108, E109
E82	Memoskop: error on D2 board	E105, E106	E105, E106
E83	Memoskop: error on D2 board or harddisc	E402, E403, E404	E402, E403, E404
E84	Memoskop: error on textcontroller D6	E601, E602	E601, E602
E85	Memoskop: keyboard error	E610, E611, E612, E620, E621	E610, E611, E612, E620, E621
E86	Control error with DL (Acquisition monitoring)	EF60, EF70	EF07
E87	"Ready" or "Stop"-Timeout recognised by Memoskop interface	EF80	
E87	Control error with DR: "Acquisition" signal from Memoskop does not arrive in time		EF08
E88	"Acquisition signal" already present before start signal image writing		EF05 / EF06

	Collimator errors	HOST D1 display
F90	No communication to collimator interface (D3) or collimator or communication interrupted	6102, 6122, 6132
F91	Faulty connection to collimator	8007
F92	Collimator hardware error	8301 to 8307

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Terms used

Host display:

The four-digit error display on the board D1 in the M20/Uroskop.
Only after removal of the cabinet cover.

Error group:

The three-digit group error display on the main control console in the area dose product display is visible for the customer.

Description:

Text as entered in the long-term error memory (only English).

Test:

Suggestions for error localization and troubleshooting.
Choose the sequence of tests according to the prevailing situation.

Remedy:

Proposals for error rectification.
Choose the sequence of the measures to be performed for error rectification, replacement of components or parts according to the prevailing situation.

Abbreviations used:

BM Operating mode
ZG Spotfilm device
TB Collimator
KK KK interface
PD Polydoros
DUEP Data transmission program
MC Motor controller
IMG Imaging system (viewed from the memory)
BS Image storage (viewed from the Uroskop)
BED Operating master (= DUEP for all serial connections)

Designation of the slaves:

Slave **0** Main control unit 1
Slave **1** Main control unit 2
Slave **2** not used
Slave **3** CPU 1 image storage
Slave **4** CPU 2 image storage
Slave **A** not used
Slave **B** Table-side control unit 1
Slave **C** Table-side control unit 2
Slave **D** IR foot switch

Communication of the basic unit with the generator.

Display 80 in the mAs display of the main control unit.

During the initialization phase of the system

if the generator is not yet finally initialized.

If the basic unit is shut down with the power switch S100 in the M20 and is switched on again.

If a reset has been performed on the host board D1.

Additional message from the generator **ERR 185** or **ERR101**,

A reset of the generator is initiated by briefly pressing the precontact of the exposure release switch.

Display 88 in the mAs display of the main control unit.

Each time the system is switched on during the initialization phase.

Fluorospot H error codes

see Camtronics service instructions.

Host display D1 0012

Error group F03

Description: Spotfilm device contactor K2 sticking.

Test: Press one of the three emergency stop switches, ⇒ contactor K2 must drop down.
Switch off system, ⇒ contactor K2 must drop down,
if not, the contactor is jammed mechanically.
The LED V10 / D4 indicator must be off with the contactor switched off.

Remedy: Replace contactor.
Replace RC circuit.
Possibly replace board D4.

Host display 0017

Error group F02

Description: Basic unit contactor K1 sticking.

Test: Press one of the three emergency stop switches, ⇒ contactor K1 must drop down.
Switch off system, ⇒ contactor K1 must drop down,
if not, the contactor is jammed mechanically.
The LED V9 / D4 indicator must be off with the contactor switched off.

Remedy: Replace contactor.
Replace RC circuit.
Possibly replace board D4.

Host display 0022

Error group F03

Description: Spotfilm device contactor K2 does not close.

Test: After the system boots, measure the voltage on the contactor coil A1 - A2,
⇒ 26V AC
The relay K2 on board D4 must have pulled in,
Check LED V10 On.

Remedy: If the voltage at the coil A1 - A2 is in the range 24 - 26 V AC,
⇒ then replace contactor.
(possibly measure contactor coil with ohmmeter, approx. 60 Ω)
If the LED V10 / D4 does not light up after the system has booted,
⇒ then board D4 can be defective.

Host display 0027

Error group F02

Description: Basic unit contactor does not close.

Test: After the system boots, measure the voltage on the contactor coil A1 - A2,
⇒ 26V AC.
The relay K1 on board D4 must have pulled in,
Check LED V9 On.

Remedy: If the voltage at the coil A1 - A2 is in the range 24 - 26 V AC,
⇒ then replace contactor (possibly measure contactor coil with ohmmeter, approx. 60 Ω)
If the LED 9 / D4 does not light up after the system has booted,
⇒ then board D4 can be defective.

Host display 0050

Error group U01

Description: Emergency stop switch pressed or safety circuit activated.

Test: Check whether one of the three emergency stop switches (spotfilm device, tube assembly support arm, control console) is pressed.

Check whether the connections of the emergency stop switches are in order.

Test fuse F12.

Check whether the safety circuit has been activated (lift, tilt, table longitudinal, tube assembly support arm)

Measure voltage at M20/X3/9 - 10 ⇒ 26V AC
M20/X3/14 - 10 ⇒ 26V AC
Wiring diagram Uroskop D page 13

Contactors K1 and K2 dropped down.

LEDs K1/K2 on D4 Off.

Remedy: Unlock the emergency stop switch by 1/4 turn to the right.

By applying 26 V DC to the connections M20 / X3 of the magnetic brake of the drive which has driven into the safety zone, release the brake and drive the drive out from the safety zone with the aid of the service board D27.
(See Uroskop D adjustment instructions)

Search through the long-time error memory for the causes for driving over the software limit switches.

Host display 0061

Error group F03

Description: Spotfilm device contactor K2 does not open during the initialization phase.

Test: Observe the LED V10 / D4 during the booting phase,
⇒ must go On - Off and On again.

Measure voltage at the contactor coil , ⇒ 26V AC, if V10/D4 lights up.

Remedy: Replace board D4.

Host display 0063

Error group F02

Description: Basic unit contactor K1 does not open during the initialization phase.

Test: Observe the LED V9 / D4 during the booting phase,
⇒ must go On - Off and On again.
Measure voltage at the contactor coil , ⇒ 26V AC, if V9/D4 on.

Remedy: Replace board D4.

Host display 0066

Error group F03

Description: Spotfilm device contactor K2 does not close during the initialization phase.

Test: Test actuation of the contactor on board D4,
⇒ LED V10 must light up and go out again during the initialization phase.
Measure voltage at the contactor coil A1 - A2, ⇒ 26V AC

Remedy: Replace board D4 if the LED V10 does not light up.
Replace the contactor if there is voltage at the coil.

Host display 0070

Error group F04

Description: Voltage 30 V DC (system lift - table longitudinal) outside the permissible range.

Test:
Test fuse F22 (25 A slow-blow) LED on D20A/B dark.
Test fuse F20 (20 A slow-blow) LED on D20A dark.
Measure voltage on transformer T1 24 - 28 (nominal 29.6V).
Test rectifier.

Consequential error 0071

Remedy:
Replace possibly defective fuses, rectifier, capacitor.
Uroskop D1: Replace board D6.
Uroskop D2/D3: Replace board D3.

Host display 0071

Error group F04

Description: Voltage 30 V DC (system tilt) outside the permissible range.

Test:
Test fuse F22 (25 A slow-blow)
Test fuse F21 (20 A slow-blow)
Test rectifier V1
Measure voltage on transformer 24 - 28 (nominal 29.6V).

Remedy:
Replace possibly defective fuses, rectifier, capacitor.
Uroskop D1: Replace board D6.
Uroskop D2/D3: Replace board D3.

Host display 0072

Error group F05

Description: Voltage 30 V DC (spotfilm device) outside the permissible range.

Test:
Check fuse F6 (8 A slow-blow).
Measure voltage on transformer T1 31 - 33 (nominal 28V).
Check contact of the contactor K2/53 - 54.
Check rectifier V3.
Check capacitor C3 and resistor R3.
LED V8 on D7 (ZG controller) Off? LEDs on D20c Off?
Error 53 flashes on D7?

Remedy:
Replace possibly defective fuses, rectifier, capacitor, resistors.
Uroskop D1: Replace board D6.
Uroskop D2/D3: Replace board D3.

Host display 0073

Error group F06

Description: Voltage 9 V DC for DUEP master and serial interfaces outside the permissible range.

Test:

Uroskop D1:	Check the + 15 V voltage on the board D21. Measure the voltage on board D6 / X2 / B7 - B8. Nominal 9 V DC
Uroskop D2/D3:	Test fuse F17. LED D3/V47 9V must light up. Measure voltage at board D3/X2/D30 - D32 (9V)

Remedy:

Uroskop D1:	Replace the boards D21 or D6 according to measurement result.
Uroskop D2/D3:	Renew fuse F17. Replace board D3.

Host display 0074

Error group F07

Description: Voltage for contactors 26 V AC outside the permissible range.
Consequential error 0050/Group error U01

Test: Check fuse F12 (3 A slow-blow).
Measure voltage at M20/X3/9 - 10 (nominal 26 V AC)
LEDs K1/K2 on board D4 Off.
LEDs F6/F20/F21 on board D3 Off.
LED V8 on board D7 Off.
Error 53 flashes on board D7.

Remedy: Replace fuse F12.
Check coils of the contactors K1 and K2.

Host display 0075

Error group F08

Description: Voltage 15 V DC for switches and light barriers outside the permissible range.
Consequential errors 0111/0112/0113, Group error U02/U03/U04

Test: Check fuse F9 (1.6 A slow-blow).
LED H1 on board D21 must light up.
Measure voltage at the transformer T1/9 - 10, around 18 V AC.
Measure voltage on the board D21.
The contactors K1 and K2 have dropped down.

Remedy: Replace fuse F9.
Replace board D21.

Host display 0076

Error group F09

Description: Voltage 26 V DC for brakes and relays outside the permissible range.

Test: Check fuse F10 (3 A slow-blow).
LED H2 on board D21 must light up.
Measure voltage at transformer T1/11-12 (nominal around 28 V AC).
Measure voltage on board D21.
Contactors K1/K2 have dropped down.

Remedy: Replace fuse F10.
Replace board D21.

Host display 0080

Error group F40

Description: AD converter on board D4 defective.

Test: Call up the ADC test value in the service program in the Unit State Current menu, test number 512 (with the function key F4).
Unit state current A/D converter test channel converted value dec. should be 512 +/- 5.

Remedy: Replace board D4.

Host display 0090

Error group F40

Description: Reference voltage of the AD converter outside the permissible range.

Test: Call up the ADC test value in the service program in the Unit State Current menu, test number 512 (with the function key F4).
Unit state current A/D converter test channel converted value dec. should be 512 +/- 5.

Remedy: Replace board D4.
System messages.

Host display 0F00

Error group F10

Description: System cannot be initialized.
Version of the software of host (Uros.Hex) and version of the parameter file in the EEPROM different (at least first letter).

Test: System remains stuck during booting with displayed error number.
Read out parameter version with service program in the Options menu item.
The host version is stated in the main menu at the top left-hand side in the service program e. g. Unit: VA00A

Remedy: Download the host software (Uros.Hex).
Load parameter set with valid version.
Replace board D1.

Host display 4130

Error group F50

Description: Motor controller board D5 defective.

Test: No actuation of system lift, system tilt, table longitudinal or tube assembly support arm (Uroskop) possible.
Check the LEDs on board D5, they must light up on actuation:

System lift	V45(green) raise, V44(yellow) lower
System tilt	V55(green) tilt up, V54(yellow) tilt down
Table longitudinal	V65(green) footwards, V64(yellow) headwards
Only Uroskop D2/D3: Column	V75(green) headwards, V74 (yellow) footwards

Remedy: Replace board D5. Basic unit system messages.

Host display 4140

Error group E41

Description: Minimum or maximum position of the system lift exceeded.

Test: Software switches are exceeded, the safety limit switches have not yet responded.
Test the minimum and maximum center of rotation height in the service program with the password __LABOR in the Unit Parameters-Table lift drive menu.

Min is 6200 (1/10 mm),	ADC at minimum position 79
Max is 10800 (1/10 mm)	ADC at maximum position 891

Remedy: Perform calibration of the lift drive.
Possibly correct the values of the unit parameters.
Replace board D4.
Replace board D5.
System messages.

Host display 4141

Error group E42

Description: Minimum or maximum position of the system tilt exceeded.

Test: Software switches are exceeded, the safety limit switches have not yet responded.
Test the maximum positions that can be moved to in the service program with the password _LABOR in the Unit Parameters-Table tilt drive menu.
Nominal values are:
Minimum approachable position 1500 (1/100 degree)
e.g. ADC at minimum position 73
Maximum approachable position 8800 (1/100 degree)
e.g. ADC at maximum position 957

Remedy: Perform calibration of the tilt drive. (Caution, use precision spirit level!)
Correct the values of the unit parameters.
Replace board D4.
Replace board D5.

Host display 4142

Error group E43

Description: Minimum or maximum position of the table longitudinal drive exceeded.

Test: Software switches are exceeded, the safety switches have not yet responded.
Check the minimum and maximum approachable positions in the service program with the password _LABOR in the Unit Parameters-Table longit. drive menu.
Nominal values are:
minimum position - 5730 (1/10 mm) maximum position 2270 (1/10 mm)

Remedy: Perform calibration of the table longitudinal drive.
Correct the values of the unit parameters.
Replace board D4.
Replace board D5.

Host display 4143

Error group E44

Description: Maximum position of the end position of the column drive exceeded.
+/- 15 degrees (only Uroskop D2/D3)

Test: Software switches are exceeded, the safety switches have not yet responded.
Check the minimum and maximum approachable positions in the service program with the password __LABOR in the Unit Parameters menu.
Nominal values are:
Min position - 1500 (1/100 degree)
Max position 1500 (1/100 degree)
Test the ADC values at min and max positions:
they should be min = 120 and max = 900.

Remedy: Correct values of the unit parameters.
Perform new calibration.
Replace board D4.
Replace board D5.

Host display 4170

Error group F40

Description: Reading error of the AD converter for the table lift.

Test: Call up the ADC test value in the service program in the Unit State Current menu, test number 512 (with the function key F4).
Unit state current A/D converter test channel converted value dec. should be 512 +/- 5.

Remedy: Replace ADO board D4.

Host display 4171

Error group F40

Description: Reading error of the AD converter for the table tilt.

Test: Call up the ADC test value in the service program in the Unit State Current menu, test number 512 (with the function key F4).
Unit state current A/D converter test channel converted value dec. should be 512 +/- 5.

Remedy: Replace ADO board D4.
System messages

Host display 4172

Error group F40

Description: Reading error of the AD converter for the table longitudinal drive.

Test: Call up the ADC test value in the service program in the Unit State Current menu, test number 512 (with the function key F4).
Unit state current A/D converter test channel converted value dec. should be 512 +/- 5.

Remedy: Replace ADO board D4.

Host display 4173

Error group F40

Description: Reading error of the AD converter for the column drive.
Only Uroskop D2/D3

Test: Call up the ADC test value in the service program in the Unit State Current menu, test number 512 (with the function key F4).
Unit state current A/D converter test channel converted value dec. should be 512 +/- 5.

Remedy: Replace ADO board D4.

Host display 4180

Error group E41

Description: Position comparison error of the table lift drive.

Test: Read out the position values of the drive with the service program in the Unit State Current menu.
The calculated values of the motor controller MC and of the ADC host must be within the limits defined in the Unit Parameters Table lift drive - permissible deviation ADC-MC.
The password for this is __LABOR Tolerance is 75 1/10 mm.

Remedy: A new calibration with the Calibration-Table lift menu can frequently already provide a remedy here. The sizes of the Min and Max positions can be taken from the Uroskop D adjustment instructions.
Check the plug connections on the board D102.
Check the potentiometer R 102 with the service program in the Unit State Current menu, the value ADC decimal corresponds approximately to the potentiometer value.
It is possible to check whether the potentiometer is defective by moving the drive and calling up the current values with function key F4.
The potentiometer can be checked with the ohmmeter after unsoldering the connections.
Check the pulses of the incremental encoder V102 in the plug M20/X6/1-2, possibly replace the incremental encoder (see service instructions).
Possibly replace board D102.

Host display 4181

Error group E42

Description: Position comparison error of the table tilt drive.

Test: Read out the position values of the drive with the service program in the Unit State Current menu.
The calculated values of the motor controller MC and of the ADC host must be within the limits defined in the Unit Parameters Table tilt drive - permissible deviation ADC-MC.
The password for this is __LABOR. Tolerance is 100 1/100 degree.

Remedy: A new calibration with the Calibration Table - Table tilt menu can frequently already provide a remedy here. The sizes of the Min and Max positions can be taken from the Uroskop D adjustment instructions.
Check the plug connections on the board D103.
Check the potentiometer R 103 with the service program in the Unit State Current menu, the value ADC decimal corresponds approximately to the potentiometer value.
It is possible to check whether the potentiometer is defective by moving the drive and calling up the current values with function key F4.
The potentiometer can be checked with the ohmmeter after unsoldering the connections.
Check the pulses of the incremental encoder V103 in the plug M20/X6/7-8, possibly replace the incremental encoder (see service instructions).
Possibly replace board D103.
Basic unit system messages

Host display 4182

Error group E43

Description: Position comparison error of the table longitudinal drive.

Test: Read out the position values of the drive with the service program in the Unit State Current menu.
The calculated values of the motor controller MC and of the ADC host must be within the limits defined in the Unit Parameters Table longit. drive - permissible deviation ADC-MC.
The password for this is __LABOR. Tolerance is 100 1/10mm.

Remedy: A new calibration with the Calibration Table-Table longit. menu can frequently already provide a remedy here. The sizes of the Min and Max positions can be taken from the Uroskop D adjustment instructions.
Check the plug connections on the board D107.
Check the potentiometer R 107 with the service program in the Unit State Current menu, the value ADC decimal corresponds approximately to the potentiometer value.
It is possible to check whether the potentiometer is defective by moving the drive and calling up the current values with function key F4.
The potentiometer can be checked with the ohmmeter after unsoldering the connections.
Check the pulses of the incremental encoder V107 in the plug M20/X7/1-2, possibly replace the incremental encoder (see service instructions).
Possibly replace board D107.

Host display 4183

Error group E44

Description: Position comparison error of the column drive.
Only Uroskop D2/D3

Test: Read out the position values of the drive with the service program in the Unit State Current menu.
The calculated values of the motor controller MC and of the ADC host must be within the limits defined in the Unit Parameters Column angle - permissible deviation ADC-MC.
The password for this is __LABOR. Tolerance is 75 1/100 degree.

Remedy: A new calibration with the Calibration Table-Column Angle menu can frequently already provide a remedy here.
The sizes of the Min and Max positions can be taken from the Uroskop D adjustment instructions.
Check the plug connections on the board D104.
Check the potentiometer R 104 with the service program in the Unit State Current menu, the value ADC decimal corresponds approximately to the potentiometer value.
It is possible to check whether the potentiometer is defective by moving the drive and calling up the current values with function key F4.
The potentiometer can be checked with the ohmmeter after unsoldering the connections.
Check the pulses of the incremental encoder V104 in the plug M20/X7/15-16, possibly replace the incremental encoder (see service instructions).
Possibly replace board D104.

Host display 41B0

Error group E41

Description: Wrong parameters for Min or Max position or ADC for the table lift.

Test: Check the entries of the Unit Parameters Table lift with the service program, password __LABOR.
Take the parameter set of the file with the highest number UROxxxxx.Pxx for the comparison.

Remedy: Correct the parameters if necessary.
Load the last parameter set from the file and send it to the unit.
Load from file and send to unit.

Host display 41B1

Error group E42

Description: Wrong parameters for Min or Max position or ADC for the table tilt drive.

Test: Check the entries of the Unit Parameters Table tilt with the service program, password __LABOR.
Take the parameter set of the file with the highest number UROxxxxx.Pxx for the comparison.

Remedy: Correct the parameters if necessary.
Load the last parameter set from the file and send it to the unit.

Host display 41B2

Error group E43

Description: Wrong parameters for Min or Max position or ADC for the table longitudinal drive.

Test: Check the entries of the Unit Parameters Table longitudinal with the service program, password __LABOR.
Take the parameter set of the file with the highest number UROxxxxx.Pxx for the comparison.

Remedy: Correct the parameters if necessary.
Load the last parameter set from the file and send it to the unit.

Host display 41B3

Error group E44

Description: Wrong parameters for Min or Max position or ADC for the column drive.
Only Uroskop D2/D3

Test: Check the entries of the Unit Parameters Column tilt with the service program, password __LABOR.
Take the parameter set of the file with the highest number UROxxxxx.Pxx for the comparison.

Remedy: Correct the parameters if necessary.
Load the last parameter set from the file and send it to the unit.

Host display 41C0

Error group none

Description: Motor controller D5 not programmed.

Test: Call up the Unit Parameters menu in the service program, test programming in the available subsystems menu.

Remedy: Motor controller programmed is ff
Motor controller not programmed is 00.
Correct programming correspondingly.

Host display 41E0

Error group none

Description: Invalid lift drive parameter.
Service error

Test: Check the entries of the Unit Parameters-Table lift with modify.
The parameter set can be taken from the file with the highest number UROxxxxx.Pxx for comparison.

Remedy: Correct the parameters and send them to the unit.

Host display 41E1

Error group none

Description: Invalid parameters of the table tilt drive.
Service error

Test: Check the entries of the Unit Parameters-Table tilt with modify.
The parameter set can be taken from the file with the highest number UROxxxxx.Pxx for comparison.

Remedy: Correct the parameters and send them to the unit.

Host display 41E2

Error group none

Description: Invalid parameters of the table longitudinal drive.
Service error

Test: Check the entries of the Unit Parameters-Table longitudinal with modify.
The parameter set can be taken from the file with the highest number UROxxxxx.Pxx for comparison.

Remedy: Correct the parameters and send them to the unit.

Host display 41E3

Error group none

Description: Invalid parameters of the column drive.
Service error

Test: Check the entries of the Unit Parameters-column tilt with modify.
The parameter set can be taken from the file with the highest number UROxxxxx.Pxx for comparison.

Remedy: Correct the parameters and send them to the unit.

Host display 41F0

Error group E41

Description: Invalid nominal position of the table lift.
Motor controller receives wrong values from the host.

Test: Check the unit parameters for the table lift drive, take the file UROXXXXX.P00 for comparison (password _LABOR).

Remedy: Correct unit parameters, possibly load the parameter set with the highest number UROXXXXX.PXX from the file and send to unit.

Host display 41F1

Error group E42

Description: Invalid nominal position of the table tilt drive.
Motor controller receives wrong values from the host.

Test: Check the unit parameters for the table tilt drive, take the file UROXXXXX.P00 for comparison (password __LABOR).

Remedy: Correct unit parameters, possibly load the parameter set with the highest number UROXXXXX.PXX from the file and send to unit.

Host display 41F2

Error group E43

Description: Invalid nominal position of the table longitudinal drive.
Motor controller receives wrong values from the host.

Test: Check the unit parameters for the table longitudinal drive, take the file UROXXXXX.P00 for comparison (password __LABOR).

Remedy: Correct unit parameters, possibly load the parameter set with the highest number UROXXXXX.PXX from the file and send to unit.

Host display 41F3

Error group E44

Description: Invalid nominal position of the column drive.
Motor controller receives wrong values from the host.
Only Uroskop D2/D3

Test: Check the unit parameters for the column drive, take the file UROXXXXX.P00 for comparison (password __LABOR).

Remedy: Correct unit parameters, possibly load the parameter set with the highest number UROXXXXX.PXX from the file and send to unit.

Host display 41F4

Error group E45

Description: Position switch error of the table transverse drive.

Test: Test the switches S60, S61, S62 for mechanical damage.
Test and if necessary readjust the positions of the switches according to Uroskop D adjustment instructions.
Check the control circuit according to Uroskop D wiring diagram page 16.

Remedy: Replace and readjust defective switches (Uroskop D adjustment instructions).

Host display 4230

Error group

Description: Initialization error of the table lift drive.

Test: Check potentiometer r102 (M20/X6/14-15 1KOhm).
Test adjustment of the potentiometer r102 (should have around --- ohm in position completely down, around --- ohm in position completely up).
Test unit parameters of the table lift drive, take parameters of the file UROXXXXX.P00 for comparison (password __LABOR).

Remedy: Replace potentiometer r102.
Adjust potentiometer.
Recalibrate lift drive.
Correct unit parameters. Possibly load the parameter set with the highest number UROXXXXX.PXX from the file and send to unit.

Host display 4231

Error group

Description: Initialization error of the table tilt drive.

Test: Check potentiometer r103 (M20/X6/18-19 1KOhm).
Test adjustment of the potentiometer r103 (should have around --- ohm in +88 degrees position, around --- ohm in -15 degree position).
Test unit parameters of the table tilt drive, take parameters of the file UROXXXXX.P00 for comparison (password __LABOR).

Remedy: Replace potentiometer r103.
Adjust potentiometer.
Recalibrate tilt drive (Caution, use precision spirit level, see Uroskop D adjustment instructions).
Correct unit parameters. Possibly load the parameter set with the highest number UROXXXXX.PXX from the file and send to unit.

Host display 4232

Error group

Description: Initialization error of the table longitudinal drive.

Test: Check potentiometer r107 (M20/X7/10-11 1KOhm).
Test adjustment of the potentiometer r107 (should have around --- ohm in completely footwards position, around --- ohm in completely headwards position).
Test unit parameters of the table longitudinal drive, take parameters of the file UROXXXXX.P00 for comparison (password __LABOR).

Remedy: Replace potentiometer r107.
Adjust potentiometer.
Recalibrate table longitudinal drive.
Correct unit parameters. Possibly load the parameter set with the highest number UROXXXXX.PXX from the file and send to unit.

Host display 4233

Error group

Description: Initialization error of the column drive.

Test: Check potentiometer r104 (M20/X7/21-22 1KOhm).
Test adjustment of the potentiometer r104 (should have around --- ohm in +15 degrees position, around --- ohm in -15 degree position).
Test unit parameters of the column angulation drive, take parameters of the file UROXXXXX.P00 for comparison (password __LABOR).

Remedy: Replace potentiometer r104.
Adjust potentiometer.
Recalibrate column drive.
Correct unit parameters. Possibly load the parameter set with the highest number UROXXXXX.PXX from the file and send to unit.

Host display 4250

Error group F51

Description: Actual value change of the lift drive without actuation

Test: Test magnetic brake MB2 of the table lift drive. The voltage at board D102/X5/1-2 should be + 26 V DC.
Check whether the brake is applied at stop. LED V43 (red) on D5 On. Replace board D20A by board D20B, error migrates?
Test the brake incidence time in the unit parameters in the parameters of the table lift drive, should be 160 ms.

Remedy: Replace board D20A.
Correct unit parameters.
Replace complete lift drive (see Uroskop D service instructions)
Replace motor controller D5 with firmware.

Host display 4251

Error group F52

Description: Actual value change of the table tilt drive without actuation

Test: Check that the LED V53 (red) drive stop on board D5 lights up.
The LEDs V54 (yellow) and V55 (green) on board D5 must not light up without actuation of the tilt drive.
Replace board D20B by board D20A, error migrates?

Remedy: Replace motor controller D5 with firmware.
Replace board D20B.

Host display 4252

Error group F53

Description: Actual value change of the table longitudinal drive without actuation

Test: Check that the LED V63 (red) drive stop on board D5 lights up.
The LEDs V64 (yellow) and V65 (green) on board D5 must not light up without actuation of the table longitudinal drive.
Replace board D20A by board D20B, error migrates?

Remedy: Replace motor controller with firmware.
Replace board D20A.

Host display 4253

Error group F54B

Description: Actual value change of the column drive without actuation

Test: Check that the LED V73 (red) drive stop on board D5 lights up. The LEDs V74 (yellow) and V75 (green) on board D5 must not light up without actuation of the column tilt drive.
Replace board D20B by board D20A, error migrates?

Remedy: Replace motor controller D5 with firmware.
Replace board D20B.
System messages

Host display 4260

Error group E51

Description: No actual value change on actuating the table lift drive.

Test: On actuation, the LED D5/V44 (yellow) must light up on lowering.
D5/V45 (green) must light up on raising.
Replace the motor power board D20A by D20B. Error migrates?
Check the wiring according to Uroskop D wiring diagram page 14.
Check motor am2, voltage at the motor = 35 V
Check magnetic brake MB2, voltage at D102/X5/3-4

Remedy: Replace the board D20A.
Replace the board D5.
Replace the drive am2 (please refer to the service instructions).

Host display 4261

Error group E52

Description: No actual value change on actuating the table tilt drive.

Test: On actuation, the LED D5/V54 (yellow) must light up on tilting up.
D5/V55 (green) must light up on tilting down.
Replace the motor power board D20B by D20A.
Check the wiring according to Uroskop D wiring diagram page 14.
Check motor am3, voltage = 35 V. Check magnetic brake MB3, voltage at D103/X5/4-3

Remedy: Replace the board D20B.
Replace the board D5.
Replace the motor am3.

Host display 4262

Error group E53

Description: No actual value change on actuating the table longitudinal drive.

Test: On actuation, the LED D5/V64 (yellow) must light up on headwards movement.
D5/V65 (green) must light up on footwards movement.
Replace the motor power board D20A by D20B. Check the wiring according to Uroskop D wiring diagram page 15. Check motor am7, measure voltage = 35 V DC. Measure magnetic brake MB7 at D107/X5/4-3

Remedy: Replace the board D20A.
Replace the board D5.
Replace the motor am7.

Host display 4263

Error group E54

Description: No actual value change on actuating the column drive.

Test: On actuation, the LED D5/V74 (yellow) must light up on footwards movement.
D5/V75 (green) must light up on headwards movement.
Replace the motor power board D20B by D20A.
Check the wiring according to Uroskop D wiring diagram page 15.
Check motor am4, voltage = 35 V DC
Check magnetic brake MB4, measure voltage at D104/X5/4-3

Remedy: Replace the board D20B.
Replace the board D5.
Replace the motor am4.

Host display 4270

Error group E51

Description: Speed of the table lift not reached or exceeded

Test:
Measure voltage of the drive motor am2, 35 V DC must be present at the motor.
Replace board D20A by board D20B.
Measure voltage on board D3 X4/7-8, nominal 35 V DC.
Measure current consumption of the motor am2, M2/X1/1 or 2.
Too high current consumption can be an indication of defective gas pressure springs. Should be around 10A on downwards movement, shortly before the lower end point.
Test magnetic brake MB2, voltage at D102/X5/4-3 nominal 26 V DC

Remedy:
Replace board D20A.
Replace the lift cylinder (see service instructions)
Replace possibly defective gas pressure spring (see service instructions)
Replace motor controller D5.

Host display 4271

Error group E52

Description: Speed of the table tilt drive not reached or exceeded

Test:
Measure voltage of the drive motor am3 directly at the motor, nominal 35 V DC.
Replace board D20B by board D20A.
Measure current consumption of the motor for both directions of travel, nominal A DC. This can be an indication of mechanical sluggishness of the table tilt.
Test magnetic brake MB3, voltage at D103/X5/4-3.

Remedy:
Replace board D20B.
Replace the drive motor am3.
Replace motor controller D5.

Host display 4272

Error group E53

Description: Speed of the table longitudinal drive not reached or exceeded.

Test:
Measure voltage of the drive motor am7 directly at the motor for both directions of travel, nominal 35 V DC.
Replace board D20A by board D20B.
Measure current consumption of the motor am7, nominal A.
Test table longitudinal drive for mechanical sluggishness and noise development.
Test magnetic brake MB7, voltage at D107/X5/4-3 26V DC

Remedy:
Replace board D20A.
Replace the motor am7.
Replace motor controller D5.
In the case of mechanical sluggishness, replace the complete patient positioning unit (see service instructions).

Host display 4273

Error group E54

Description:
Speed of the column drive not reached or exceeded.
Only Uroskop D2/D3

Test:
Measure voltage of the drive motor am4, 35 V DC must be present.
Replace board D20B by board D20A.
Measure current consumption of the motor am4 for both directions of travel, nominal A.
Test drive for mechanical sluggishness and noise development.
Test magnetic brake MB4, measure voltage at D104/X5/4-3.

Remedy:
Replace board D20B.
Replace the drive motor am4.
Replace motor controller D5.

Host display 4280

Error group F51

Description: Wrong direction of rotation of the table lift drive

Test: Test connections of the motor am2 according to Uroskop D wiring diagram page 14, replace board D20A by board D20B, error migrates?

Remedy: Correct connections.
Replace board D20A.

Host display 4281

Error group F52

Description: Wrong direction of rotation of the table tilt drive

Test: Test connections of the motor am3 according to Uroskop D wiring diagram page 14, replace board D20B by board D20A, error migrates?

Remedy: Correct connections.
Replace board D20B.

Host display 4282

Error group F53

Description: Wrong direction of rotation of the table longitudinal drive

Test: Test connections of the motor am7 according to Uroskop D wiring diagram page 15, replace board D20A by board D20B, error migrates?

Remedy: Correct connections.
Replace board D20A.

Host display 4283

Error group F54

Description: Wrong direction of rotation of the column drive
Only Uroskop D2/D3

Test: Test connections of the motor am4 according to Uroskop D wiring diagram page 15, replace board D20B by board D20A, error migrates?

Remedy: Correct connections.
Replace board D20B.

Host display 4290

Error group F51

Description: Three times actuation of the table lift drive of no avail

Test: Actuate the lift drive three times in the same direction, after the first actuation without subsequent movement comes error 41A0, after the third time error 4290.
Test LED displays V44 (yellow) or V45 (green) on board D5, they must light up on actuation.
Test voltage 35 V DC at D20A/X1/20-22, fuse F20.
Check magnetic brake MB2, voltage at D102/X5/1-2 26 V DC.
LED MB2 (V41, green) on board D4 lights up on releasing the brake.

Remedy: Replace fuse F20.
Replace motor controller D5.
Replace board D20A.

Host display 4291

Error group F52

Description: Three times actuation of the table tilt drive of no avail

Test: Actuate the table tilt drive three times in the same direction, after the first actuation without subsequent movement comes error 41A1, after the third time error 4291.
Test LED displays V54 (yellow) or V55 (green) on board D5, they must light up on actuation.
Test voltage 35 V DC at D20B/X1/20-22, fuse F21.
Check magnetic brake MB3, voltage at D103/X5/1-2 26 V DC.
LED MB3 (V42, green) on board D4 lights up on releasing the brake.

Remedy: Replace fuse F21.
Replace motor controller D5.
Replace board D20B.

Host display 4292

Error group F53

Description: Three times actuation of the table longitudinal drive of no avail

Test: Actuate the table longitudinal drive three times in the same direction, after the first actuation without subsequent movement comes error 41A2, after the third time error 4292.
Test LED displays V64 (yellow) or V65 (green) on board D5, they must light up on actuation.
Test voltage 35 V DC at D20A/X1/20-22, fuse F20.
Check magnetic brake MB4, voltage at D107/X5/1-2 26 V DC.
LED MB4 (V43, green) on board D4 lights up on releasing the brake.

Remedy: Replace fuse F20.
Replace motor controller D5.
Replace board D20A.

Host display 4293

Error group F54

Description: Three times actuation of the column drive of no avail

Test: Actuate the column drive three times in the same direction, after the first actuation without subsequent movement comes error 41A3, after the third time error 4293.
Test LED displays V74 (yellow) or V75 (green) on board D5, they must light up on actuation.
Test voltage 35 V DC at D20B/X1/20-21, fuse F21.
Check magnetic brake MB7, voltage at D107/X5/1-2 26 V DC.
LED MB7 (V44, green) on board D4 lights up on releasing the brake.

Remedy: Replace fuse F21.
Replace motor controller D5.
Replace board D20B.

Host display 42A0

Error group F50

Description: Controller timeout of the table lift drive.
LM 628 on board D5 defective.

Test: None.

Remedy: Replace motor controller D5.

Host display 42A1

Error group F50

Description: Controller timeout of the table tilt drive.
LM 628 on board D5 defective.

Test: None.

Remedy: Replace motor controller D5.

Host display 42A2

Error group F50

Description: Controller timeout of the table longitudinal drive.
LM 628 on board D5 defective.

Test: None.

Remedy: Replace motor controller D5.

Host display 42A3

Error group F50

Description: Controller timeout of the column drive.
LM 628 on board D5 defective.

Test: None.

Remedy: Replace motor controller D5.

Host display 6100

Error group E50

Description: Host D1 to motor controller D5 communication error.
Checksum error

Test: The connection from the host D1 to the motor controller is broken or faulty.

Remedy: Check contacts of the board connectors.
Replace host board D1.
Replace motor controller D5.

Host display 6101

Error group E70

Description: Host D1 to spotfilm device controller D7 communication error.
Checksum error

Test: The connection from the host D1 to the spotfilm device controller D7 is broken or faulty.

Remedy: Check contacts of the boards.
Replace host board D1.
Replace spotfilm device controller.

Host display 6102

Error group F90

Description: Host D1 to the Com controller D6 (for collimator) communication error.
Checksum error
Only Uroskop D1

Test: The connection from the host D1 to the Com controller D6 is broken or faulty.

Remedy: Check contacts of the board connectors.
Replace host board D1.
Replace Com controller D6.

Host display 6103

Error group F80

Description: **Uroskop D1:**
Host D1 to the Com controller D6 (for Memoskop) communication error.
Checksum error

Uroskop D2
Host D1 to BBC D3 (for Memoskop) communication error

Test: None.

Remedy: **Uroskop D1:**
Replace board D6.
Replace board D1 (host).

Uroskop D2:
Replace board D3.
Replace board D1 (host).

Host display 6104

Error group

Uroskop D1: F60
Uroskop D2/D3: F30

Description: Uroskop D1: Host D1 to the DUEP master D6 communication error
Uroskop D2/D3: Host D1 to the DUEP master D3 communication error
Checksum error

Test: None.

Remedy: Test contacts of the board connectors.
Replace host board D1.
Uroskop D1: Replace board D6.
Uroskop D2/D3: Replace board D3.

Host display 6105

Error group

Uroskop D1: E20
Uroskop D2: E60

Description: Uroskop D1: Host D1 to the XCS controller D2 communication error
Uroskop D2: Host D1 to the KK interface D30 communication error
Checksum error

Test: None.

Remedy: Uroskop D1: Replace board D2.
Uroskop D2: Replace board D30.

Host display 6106

Error group E61

Description: Host D1 to the generator control console interface D30 communication error
Checksum error
Connection is broken or defective.
Only Uroskop D2/D3

Test: Test plug connections of the boards.

Remedy: Replace board D30.

Host display 6120

Error group E50

Description: Communication error of the motor controller D5
Reception timeout

Test: Test plug connections of the boards.

Remedy: Replace board D5.
Possibly replace host board D1.

Host display 6121

Error group E70

Description: Communication error of the spotfilm device controller D7
Reception timeout

Test: Test plug connections of the boards.

Remedy: Replace board D7.
Possibly replace host board D1.

Host display 6122

Error group F90

Description: Uroskop D1: Communication error of the Com controller D6
Uroskop D2/D3: Communication error of the BBC D3 collimator

Test: Test plug connections of the boards.
Test cable to the collimator.
Uroskop D1: Test plug X3/D6.
Uroskop D2/D3: Test plug X3/D3.
Consequential error 900C

Remedy: Uroskop D1: Replace board D6.
Uroskop D2/D3: Replace board D3.
Possibly replace host board D1.

Host display 6123

Error group F80

Description: Communication error to the Memoskop, reception timeout.
Only Uroskop D1/D2

Test:

Uroskop D1
Test connections from the Memoskop to the Com controller D6.
Connection D6/X14 to Memoskop/X6
See Uroskop D1 wiring diagram page 22

Uroskop D2
Test connections from the Memoskop to the image storage interface D3.
Connection D3/X2 to D30/X2 and D30/X14 to Memoskop/X6
See Uroskop D2 wiring diagram page 22

Remedy:

Uroskop D1
Replace Com controller D6.
Repair and possibly replace cable connection.
Replace board D1 in the Memoskop.

Uroskop D2
Replace image storage interface D3.
Repair and possibly replace cable connections.
Replace board D1 in the Memoskop.

Host display 6124

Error group

Uroskop D1: F60
Uroskop D2/D3: F30

Description: Uroskop D1: DUEP master D6 communication error
Uroskop D2/D3: DUEP master D3 communication error
Reception timeout

Test: Test plug connections of the boards.

Remedy: Uroskop D1: Replace board D6.
Uroskop D2/D3: Replace board D3.
Possibly replace host D1.

Host display 6125

Error group

Uroskop D1: E20
Uroskop D2 E60

Description: Uroskop D1: XCU interface D2 communication error
Uroskop D2: KK interface D30 communication error
Reception timeout

Test: Test the plug connections of the boards.

Uroskop D2/D3
Test fiber optic cable M20/D30/U1 - Polydoros SX/D211.
Consequential errors: 7011 and 900C.

Remedy: Uroskop D1: Replace board D2.
Uroskop D2/D3: Replace board D30.
Replace fiber optic cable.
Possibly replace host board D1.

Host display 6126

Error group **E61**

Description: Generator - control console interface D30 communication error
Reception timeout
Only Uroskop D2/D3

Test: Test the plug connections of the boards.
Test fiber optic cable M20/D30/U1 - Polydoros SX/D211.
Consequential error: 7011 and 900C.

Remedy: Replace fiber optical cable.
Replace board D30.
Possibly replace host board D1.

Host display 6130

Error group E50

Description: Initialization timeout of the motor controller D5

Test: Is board D5 plugged in correctly?
Check the LEDs on board D5, V43, V53, V63, V73, V83 (red) must light up after booting.
Configuration of the motor controller in the unit parameters - available subsystems - basic unit (motor controller D5) must be ff.
Seven-segment LED display must be at 00 after the system has booted, the decimal point must flash.

Remedy: Plug board D5 in M20 correctly.
Configure board D5 in the unit parameters.
Replace motor controller D5.

Host display 6131

Error group E70

Description: Initialization timeout of the spotfilm device controller D7

Test: Is board D7 in the M20 plugged in correctly?
Check the LEDs on board D7, V8 (green), V22 (red) must be On after booting. LED V47, VLS1, VLS2, HLS1, HLS2, MLS and SAREF (green) must be On after booting.
Configuration of the spotfilm device controller D7 in the unit parameters - available subsystems - spotfilm device (spotfilm device controller D7) must be ff.
Seven-segment LED display must be at 00 after the system has booted, the decimal point must flash.

Remedy: Plug board D7 in M20 correctly.
Configure board D7 in the unit parameters correctly.
Replace spotfilm device controller D7.

Host display 6132

Error group F90

Description:

Uroskop D1: Initialization timeout D6 (collimator)
Uroskop D2/D3: Initialization timeout D3 (collimator)

Test:

Check configuration in the unit parameters.
Uroskop D1: Check the LED displays on board D6.

Uroskop D2/D3: Check the LED displays on board D3.
V62, V45, V61 (green) must be On after booting.
LED V55 F20,F21,F6 and RES1 (green) must be On after booting.
LED V47 9V- (green) must be On, M31B flashes at low brightness.
LED V46, all On, except for the lowest.

Remedy:

Configuration in the unit parameters - available subsystems:
Uroskop D1: Collimator interface (on D6) must be ff.
Uroskop D2/D3: Communication interface D3 must be ff.

Uroskop D1: Replace Com controller D6.
Uroskop D2/D3: Replace collimator control console controller D3.

Host display 6133

Error group F80

Description: Initialization timeout of the Memoskop
Only Uroskop D1/D2

Test: Is the board D30/M20 plugged in?
Check configuration in the unit parameters.
Check LED displays on the Memoskop after booting the system.
Required: LED (green) -5V On, LED (green) + 5V On, VEE and VCC (green) On, INT (yellow) Off, PLL (red) Off, D0-D3 (red) Off, D4 (red) On, D5-D7 flicker.

Remedy: Uroskop D1
Configuration in the unit parameters - available subsystems - Memoskop interface (on D6) must be ff.

Uroskop D2
Configuration in the unit parameters - available subsystems - Memoskop interface on D30 must be ff.
Replace board D1 in the Memoskop. - Service note RLL5-310.076.02.01
Uroskop D1: Replace board D6.
Uroskop D2: Replace board D30.

Host display 6134

Error group

Uroskop D1: F60
Uroskop D2/D3: F30

Description: Uroskop D1: Initialization timeout of the DUEP master D6
Uroskop D2/D3: Initialization timeout of the DUEP master D3

Test: Test the plug connections of the boards.
Check configuration in the unit parameters.

Remedy: Uroskop D1
All D6 interfaces must be at ff in the unit parameters - available subsystems.
Uroskop D2
KK interface/RAS must be ff in the unit parameters - available subsystems - system interface.
Uroskop D1: Replace Com controller D6.
Uroskop D2/D3: Replace collimator control console controller D3.

Host display 6135

Error group

Uroskop D1: E20
Uroskop D2: E60

Description:
Uroskop D1: Initialization timeout of the XCU interface D2
Uroskop D2/D3: Initialization timeout of the KK interface D30

Test:
Test the plug connections of the boards.
Uroskop D1: Is the board D2 correctly configured?

Uroskop D2/D3: Is the board D30 correctly plugged in?
Is the board D30 correctly configured?

Remedy:
Plug in the boards correctly.
Uroskop D1: configuration in the unit parameters - available subsystems - XCS interface D2 must be ff.
Uroskop D2/D3: configuration in the unit parameters - available subsystems - system interface (KK interface/RAS) D30 must be ff.

Uroskop D1: Replace board D2.
Uroskop D2/D3: Replace system coupler D30.

Host display 6136

Error group E61

Description: Initialization timeout of the generator-control console interface on D30.
Only Uroskop D2/D3

Test: Perform reset by switching system off and on.
Uroskop D2: Error display of the board D30 must stand at 00.
Uroskop D3: Error displays of the board D30 should be 90, 98, A8.
Check configuration of the board D30.

Remedy: Configuration in the unit parameters - available subsystems - generator control console interface D30 must be ff.
Replace system coupler D30.

Host display 6170

Error group U05

Description: Exposure or fluoroscopy foot switch is active during the initialization phase.

Test: Check A-DL foot switch.
Measure through foot switch according to Uroskop D wiring diagram page 16.
Test connection leads for short circuit / ground fault.

Remedy: Firstly let the system boot through the complete initialization phase, only then activate the foot switch (release of exposure or fluoroscopy)
Replace A-DL foot switch.

Host display 7011

Error group E62

Description: No communication to the generator.
Only Uroskop D2/D3

Test: Test fiber optic cable from generator/D211 to unit M20/D30.
Test fiber optic cable plug on the boards D211 (generator) and D30, whether light signals can be detected. (Best of all during system booting).

Remedy: Replace defective fiber optic cable.
Replace board D211 in the Polydoros SX.
Replace board D30 in the Uroskop M20.

Host display 7012

Error group E63

Description: Data transfer to the generator is interrupted.
Only Uroskop D2/D3

Test: Test fiber optic cable Uroskop/M20/D30 to the generator D211.

Remedy: Replace board D30 in the Uroskop M20.
Replace board D211 in the Polydoros SX.
Replace fiber optic cable.

Host display 7015

Error group none

Description: The Polydoros SX has transmitted an error.
Only Uroskop D2/D3
Consequential error after reset of the Uroskop on the board D1 (host)
Consequential error after switching the Uroskop off and on with the power switch in M20 (Uroskop cabinet)

Test: Perform system reset by switching the system off and on at the main control console.
Check error memory of the generator.

Remedy: Check and repair generator according to service instructions.
(Error list of the generator is contained in the Polydoros SX service program.)

Host display 7016

Error group

Description: Message from the generator, the DR system is not ready.
Uroskop D2/D3

Test: Test the DR system,
Fluorospot H: according to the existing documents (own error list)
Memoskop: test consequential errors, LED displays on the Memoskop.
Test the connections KK42 and the jumpers on board D271
(see Uroskop wiring diagram page 24)

Remedy: Repair DR system (possibly only reboot)
Bring connections or contacts into order.
Replace D271.

Host display 8007

Error group F91

Description:

Uroskop D1: Disturbed connection from Com controller D6 to the collimator.
Uroskop D2/D3: Disturbed connection from BBC D3 to the collimator.

Test:

Uroskop D1: Check connections M20/D6 to the collimator according to wiring diagram page 20, possibly measure with ohmmeter.
Uroskop D2/D3: Check connections M20/D3 to the collimator according to wiring diagram page 20, possibly measure with ohmmeter.
Test collimator: Set switches D12/S1-1 and S1-8 to Test and Loop, jumper fiber optic connections D11 with short fiber optic cable, switch reset, the lamp test is performed first, 7 segments are then incremented.
Caution: Collimator test does not work with the new SW versions.

Remedy:

Repair connections if necessary.
Uroskop D1: Replace board D6.
Uroskop D2/D3: Replace board D3.
Collimator: Replace board D11.

Host display 8008

Error group

Description: Invalid source-image distance transmitted to the collimator.

Test: Configuration of the source-image distance in the unit parameters.

Remedy: Source-image distance must be 1150 in the unit parameters-collimator.

Host display 8009

Error group

Description: Collimator not ready

Test: Check collimator. (Description of the internal errors in the wiring diagram of the collimator.)

Remedy: Replace defective collimator either completely or the boards D11 or D12.

Host display 8301

Error group F92

Description: Collimator error (width)

Test: Check collimator for mechanical errors.
Evaluate internal error memory of the collimator.
See collimator wiring diagram.

Remedy: Replace board D11 or D12.
Replace collimator completely.

Host display 8302

Error group F92

Description: Collimator error (height)

Test: Check collimator for mechanical errors.
Evaluate internal error memory of the collimator.
See collimator wiring diagram.

Remedy: Replace board D11 or D12.
Replace collimator completely.

Host display 8303

Error group F92

Description: Collimator error (height and width)

Test: Check collimator for mechanical errors.
Evaluate internal error memory of the collimator.
See collimator wiring diagram.

Remedy: Replace board D11 or D12.
Replace collimator completely.

Host display 8304

Error group F92

Description: Collimator iris diaphragm error

Test: Check collimator for mechanical errors.
Evaluate internal error memory of the collimator.
See collimator wiring diagram.

Remedy: Replace board D11 or D12.
Replace collimator completely.

Host display 8305

Error group F92

Description: Collimator width and iris error

Test: Check collimator for mechanical errors.
Evaluate internal error memory of the collimator.
See collimator wiring diagram.

Remedy: Replace board D11 or D12.
Replace collimator completely.

Host display 8307

Error group F92

Description: Collimator width, height and iris error

Test: Check collimator for mechanical errors.
Evaluate internal error memory of the collimator.
See collimator wiring diagram.

Remedy: Replace board D11 or D12.
Replace collimator completely.

Host display 9008

Error group E34

Description: Message from XCU total system ready does not come.
Only Uroskop D1

Test: Check cabling of the XCS.
Test Polydoros LX, the display b must be present on the board D100.
Test Videomed DI, error display on the board D3 all red LEDs must be Off.
Pixel clock must be measurable on board D3.

Remedy: Bring XCS cabling into order (see wiring diagram G5353/C - 4)
Repair generator (see Polydoros LX error description)
Repair television system (see Videomed DI service instructions)

Host display 900B

Error group

Uroskop D1: E33
Uroskop D2/D3: E67

Description: Radiation interrupted by the spotfilm device

Test:
Cassette is in the spotfilm device, but not in park position.
Loading button pressed during fluoroscopy?
Cassette clamping arms move during fluoroscopy or exposure?
Cassette transport not completely performed?

Remedy:
Load new cassette.
If no cassette is required, press the loading button and thus perform an empty loading process.

Host display 900C

Error group E66

Description:
Generator disabled because of timeout.
Only Uroskop D2/D3

Test:
The error comes after reset of the Uroskop host on the board D1
Consequential error is 7015
Test fiber optic cable M20/D30 - Polydoros SX/D211
Consequential error 7013
Test system for component failure,
(collimator, main control console KK interface, RAS, table-side control unit, IR foot switch)

Remedy:
Switch the system OFF and back ON at the main control console (reset)
Replace the fiber optic cable
Replace possibly defective components
Replace board D3 BBC
Replace board D1 in the main control unit
Replace the table-side control unit
Replace board D30.

Host display 9101

Error group **E68**

Description: RAS G station reports ROM error in the generator
Only Uroskop D3

Test: Evaluate internal error memory of the generator.
In the Polydoros service program in the main menu under Diagnostics Errorlog.
See Polydoros SX error list in the Polydoros service program in the main menu under Info-Show Errors.

Remedy:

Host display 9102

Error group **E68**

Description: RAS G station reports RAM error in the generator
Only Uroskop D3

Test: Evaluate internal error memory of the generator.
In the Polydoros service program in the main menu under Diagnostics Errorlog.
See Polydoros SX error list in the Polydoros service program in the main menu under Info-Show Errors.

Remedy:

Host display 9103

Error group E68

Description: RAS G station reports EEPROM error of the generator
Only Uroskop D3

Test: Evaluate internal error memory of the generator.
In the Polydoros service program in the main menu under Diagnostics Errorlog.
See Polydoros SX error list in the Polydoros service program in the main menu under Info-Show Errors.

Remedy:

Host display 9104

Error group E68

Description: RAS G station reports Dual Port RAM error of the generator
Only Uroskop D3

Test: Evaluate internal error memory of the generator.
In the Polydoros service program in the main menu under Diagnostics Errorlog.
See Polydoros SX error list in the Polydoros service program in the main menu under Info-Show Errors.

Remedy:

Host display 9105

Error group E68

Description: RAS G station reports general timer error of the generator
Only Uroskop D3

Test: Evaluate internal error memory of the generator.
In the Polydoros service program in the main menu under Diagnostics Errorlog.
See Polydoros SX error list in the Polydoros service program in the main menu under Info-Show Errors.

Remedy:

Host display 9106

Error group E68

Description: RAS G station reports watchdog error of the generator
Only Uroskop D3

Test: Evaluate internal error memory of the generator.
In the Polydoros service program in the main menu under Diagnostics Errorlog.
See Polydoros SX error list in the Polydoros service program in the main menu under Info-Show Errors.

Remedy:

Host display 910B

Error group E69

Description: RAS G station reports connection between main processor and subprocessor is interrupted. Timeout.
Only Uroskop D3

Test: Test the communication of the RAS with the service program of the RAS (possibly record and evaluate RAS trace).

Remedy: Replace fiber optic cable
Replace RAS2/3 board
Replace RAS G station

Host display 910C

Error group E64

Description: No communication from RAS G or KK interface to the generator
Only Uroskop D2/D3

Test: Test fiber optic cable of the RAS connections to the generator.
Test fiber optic cable from D30 to board D211 in the generator.
Test RAS G station with the service program RAS.
All red LEDs on the RAS G station must be dark.

Remedy: Replace possibly defective fiber optic cable
Replace RAS G station in the Uroskop/M20
Replace system coupler D30.

Host display 910D

Error group E65

Description: RAS G reports communication to the generator was interrupted
Only Uroskop D3

Test: Test fiber optic cable RAS G in the M20/Uroskop to the RAS 2/3 in the generator.
Test RAS G station with the service program for RAS.

Remedy: Replace possibly defective fiber optic cable
Replace RAS G station
Replace RAS-2/3 in the generator.

Host display 9120

Error group E32

Description: Init block of XCS received after booting already finished
Only Uroskop D1

Test: None

Remedy: Replace board D200 in the Polydoros LX (see service instructions PL-LX)

Host display 9130

Error group

Description: Error occurred after timeout of the XCS
Only Uroskop D1

Test: None.

Remedy: Replace board D200 in the Polydoros LX (see service instructions PL-LX)

Host display 9140

Error group E30

Description: Contact to XCU broken during operation.
Only Uroskop D1

Test: Test connections between board D2 (Uroskop Com controller) and XCS board D200 (in the Polydoros LX).

Remedy: Correct connections.
Replace board D2 in the Uroskop D1.
Replace board D200 in the Polydoros LX.

Host display 9150

Error group E31

Description: XCU sends no data within the system booting time.
Only Uroskop D1

Test: Test Videomed DI whether ready (pixel clock present?)
See Videomed DI service instructions.
Cable connection to the XCS D200 in order?
Uroskop D, plugs of the board D2, cable connection in order.

Remedy: Repair possible defective components.
Bring cable connections into order.
Videomed DI: Replace board D5.
Uroskop basic unit: Replace board D2.
Polydoros LX: Replace board D200.
(Caution, observe service instructions for the generator.)

Host display B009

Error group

Description: Spotfilm device not active

Test: Check whether the spotfilm device is configured out with the service program in the unit parameters.
Available subsystems spotfilm device controller D7 must be ff.

Remedy: Configure the spotfilm device again.

Host display B00B

Error group

Description: Spotfilm device disabled with EMERGENCY STOP

Test: Test all emergency stop switches.
Test whether the clamping arms have travelled into the safety limit switch.

Remedy: Unlock the emergency stop with $\frac{1}{4}$ turn to the right.
Test Ref. switch S51 whether it is actuated, if yes recalibrate drive.

Host display B00C

Error group F70

Description: Spot film device controller D7 defective

Test: Can be consequential error of B121, then observe speed info 88-93.
Test unit parameters - cassette release drive - recovery time should be 20H. Reduction of the max. opening on unloading should be 100.

Remedy: Correct unit parameters.
Replace spotfilm device controller board D7.

Host display B00D

Error group

Description: Unloading command without cassette in the spotfilm device

Test: Test whether a cassette is in the spotfilm device.

Remedy: Press loading button on the spotfilm device once, perform empty loading process.

Host display B00E

Error group

Description: Currently not executable command

Test:

Remedy:

Host display B010

Error group

Description: Exposed cassette in the spotfilm device, exposure not possible.

Test:

Remedy: Load unexposed cassette

Host display B012

Error group E78

Description: Cassette loading error

Test:

Remedy: Reload unexposed cassette

Host display B013

Error group E75

Description: Light barrier D53a defective
(Light barrier on the front to the left)

Test:

Remedy: Replace the light barrier board D53a

Host display B014

Error group E75

Description: Light barrier D53b defective
(Light barrier on the front to the right)

Test:

Remedy: Replace the light barrier board D53b

Host display B015

Error group E75

Description: Light barrier D53e defective
(Light barrier spotfilm device center)

Test:

Remedy: Replace the light barrier board D53e.
Reset cassette inwards movement to the exposure position and centering.

Host display B016

Error group E75

Description: Light barrier D53c defective
(Light barrier at the rear on the left)

Test:

Remedy: Replace the light barrier board D53c

Host display B017

Error group E75

Description: Light barrier D53d defective
(Light barrier to the rear on the right)

Test:

Remedy: Replace the light barrier board D53d

Host display B018

Error group

Description: Exposure request without free cassette.

Test: Test display beneath the area dose display on the main control console, it must show 1 or 2.

Remedy: Load unexposed cassette.

Host display B01A

Error group E77

Description: Calculated cassette size too small.

Test: The smallest possible cassette is 18 x 24 cm or 8 x 10".
Read out cassette length and width with the service PC in the Unit State Current in the menu item Spotfilm device.
Nominal 2000 1/10mm
Check the value entered for the min. cassette size in the unit parameters (should be larger than the value calculated in the Unit State Current)

Remedy: Check reference switch S51 mechanically, replace if necessary.
Adjust reference switch mechanically.
Readjust reference switch S51 in the spotfilm device with the service PC.
Possibly correct value of min cassette size in the unit parameters.

Host display B01B

Error group E77

Description: Calculated cassette size too large.

Test: The largest possible cassette is 43 x 35 cm or 17 x 14".
Read out cassette length and width with the service PC in the Unit State Current in the menu item Spotfilm device.
Nominal 4650 1/10 mm approximate figure (can vary slightly from unit to unit, this depends upon the position of the Ref. switch S51).
Check the value entered for the max. cassette size in the unit parameters (should be smaller than the value calculated in the Unit State Current)

Remedy: Check reference switch S51 mechanically, replace if necessary.
Adjust reference switch mechanically.
Readjust reference switch S51 in the spotfilm device with the service PC.
Possibly correct value of max cassette size in the unit parameters.

Host display B01C

Error group F76

Description: Hardware error in the spotfilm device

Test: Check reference switch S51, light barrier boards D53 a-d, drive belts etc. for mechanical damage.

Remedy: Replace part according to defect.
(See also various Uroskop D service instructions)

Host display B110

Error group E71

Description: Control error in the cassette transport drive

Test: Check magnetic brake MB50, voltage at D50/X61/+ - 26 V DC.
LED MB on board D7 (V14, green) must light up on releasing the brake.
Replace board D20C by another D20, error migrates?
Measure voltage 35 V DC at D20C/X1/20-22, test fuse F6.
Check cassette transport drive for sluggishness.
For this possibly remove drive belt and move parts by hand.
Check whether the cassette does not stick on the bottom of the cassette shaft.
Caution! Do not use any metal cassettes on the Uroskop D.
Check unit parameters, take parameter file UROXXXXX.P00 for the comparison.

Remedy: Replace fuse F6.
Replace board D20C.
Replace board D50.
Replace board D7.
Make the mechanism move smoothly, possibly replace defective parts.
Correct unit parameters, possibly load the parameter file with the highest number UROXXXXX.PXX from the file and send to unit.
Replace drive motor Am50.

Host display B111

Error group E73

Description: Control error in the cassette clamping drive

Test:

Check magnetic brake MB51, voltage at D50/X63/+ - 26 V DC.

LED MB on board D7 (V17, green) must light up on releasing the brake.

Replace board D20C by another D20, error migrates?

Measure voltage 35 V DC at D20C/X1/20-22, test fuse F6.

Check cassette clamping drive for mechanical sluggishness.

For this after removing the spotfilm device cover, push the clamping arms with a screwdriver (or similar) through the elongated hole at the head-end side spotfilm device center towards the outside.

Check unit parameters, take parameter file UROXXXXX.P00 for the comparison.

Remedy:

Replace fuse F6.

Replace board D20C.

Replace board D50.

Replace board D7.

Make the mechanism move smoothly, possibly replace defective parts.

Caution! When replacing parts, you must recalibrate the reference switch S51.

Correct unit parameters, possibly load the parameter file with the highest number UROXXXXX.PXX from the file and send to unit.

Replace drive motor am51.

Host display B112

Error group E73

Description: Control error of the width diaphragm drive

Test: Test the width diaphragm drive for mechanical sluggishness.
The diaphragm plates can be moved by hand after removing the spotfilm device cover.
Examine the spotfilm device cover internally for traces of grinding.
Check unit parameters, take parameter file UROXXXXX.P00 for the comparison.
Test tension of the drive belt.

Remedy: Make the mechanism move smoothly, possibly replace defective parts.
Replace board D7.
Replace board D50 in the spotfilm device.
Replace drive motor am52.

Host display B120

Error group E71

Description: Accuracy error of the cassette transport drive

Test: Check the cassette transport drive for sluggishness.
For this possibly remove drive belt and move parts by hand.
Check that the cassette does not stick on the bottom of the cassette shaft.
Caution! Do not use any metal cassettes on the Uroskop D.
Check unit parameters, take parameter file UROXXXXX.P00 for the comparison.

Remedy: Replace board D7.
Make the mechanism move smoothly, possibly replace defective parts.
Correct unit parameters, possibly load the parameter file with the highest number UROXXXXX.PXX from the file and send to unit.
Replace drive motor am50.

Host display B121

Error group E72

Description: Accuracy error of the cassette clamping drive

Test: Test the cassette clamping drive for mechanical sluggishness.
For this after removing the spotfilm device cover, the clamping arms can be pressed to the outside with a screwdriver (or similar) through the elongated hole on the head-end side of the spotfilm device center.
Check unit parameters, compare with parameter file UROXXXXX.P00.

Remedy: Replace board D7.
Make the mechanism move smoothly, possibly replace defective parts.
Caution! When replacing parts you must recalibrate the reference switch S51.
Correct unit parameters, possibly load the parameter file with the highest number UROXXXXX.PXX from the file and send to unit.
Replace drive motor am51.

Host display B122

Error group E73

Description: Accuracy error of the width diaphragm drive

Test: Test the width diaphragm drive for mechanical sluggishness.
The diaphragm plates can be moved by hand after removing the spotfilm device cover.
Examine the spotfilm device cover on the inside for traces of grinding.
Measure voltage 30 V DC at the fuse F7 to 0V.
Check unit parameters, compare with parameter file UROXXXXX.P00.
Test tension of the drive belt.

Remedy: Make the mechanism move smoothly, possibly replace defective parts.
Replace board D7.
Replace board D50 in the spotfilm device.
Replace drive motor am52.

Host display B130

Error group F70

Description: Controller timeout for transport drive.
D7/LM 628 test not in order.

Test: None.

Remedy: Replace spotfilm device controller D7.

Host display B131

Error group F70

Description: Controller timeout of clamping arm drive.
D7/LM 628 test not in order.

Test: None.

Remedy: Replace spotfilm device controller D7.

Host display B132

Error group F70

Description: Controller timeout for width diaphragm drive.
D7/LM 628 test not in order.

Test: None.

Remedy: Replace spotfilm device controller D7.

Host display B140

Error group E71

Description: Wrong direction of rotation of the motor am50 for cassette transport drive.

Test: Test connections of the motor am50 according to Uroskop D wiring diagram page 17.
Test connections of board D50/X58 and X62 (wiring diagram page 17).
Replace board D20C with another D20, error migrates?

Remedy: Correct connections of the motor am50 or of the board D50.
Replace board D20C.
Possibly replace spotfilm device controller D7.

Host display B141

Error group E72

Description: Wrong direction of rotation of the motor am51 for cassette clamping drive.

Test: Test connections of the motor am51 according to Uroskop D wiring diagram page 17.
Test connections of board D50/X58 and X64 (wiring diagram page 17).
Replace board D20C with another D20, error migrates?

Remedy: Correct connections of the motor am51 or of the board D50.
Replace board D20C.
Possibly replace spotfilm device controller D7.

Host display B142

Error group E73

Description: Wrong direction of rotation of the motor am52 width diaphragm drive.

Test: Test connections of the motor am52 according to Uroskop D wiring diagram page 18.
Test connections D50/X58 and X65 according to wiring diagram page 18.

Remedy: Correct connections if necessary.
Replace board D7.

Host display B150

Error group E71

Description: The cassette transport drive does not reach nominal speed

Test:
Check whether metal cassettes are used (not permitted for Uroskop D).
Test the drive belts for wear and correct tension.
Measure the voltage 35 V DC transformer T1 31-33, M20/X9/5-6 and D50/X62 + -. See Uroskop D wiring diagram page 12 and 17.
Replace the board D20C by another D20, error migrates?
Test the drive for mechanical sluggishness.
Check unit parameters, take the parameter set from the file with the highest number UROxxxxx.Pxx for the comparison (password _LABOR)
Measure voltage of the magnetic brake MB 50 at D50/X61/ + - and D21/20-24, nominal 26 V DC. Magnetic brake lifts off?

Remedy:
Replace worn out drive belts.
Readjust belt tensions if necessary.
Possibly replace rectifier V3 in M20.
Possibly replace capacitor C3 in M20.
Replace board D20C.
Correct unit parameters.
Replace board D7.
Replace motor am50.
Replace board D21.

Host display B151

Error group E72

Description: The cassette clamping drive does not reach nominal speed

Test:
Test drive belts for wear.
Measure the voltage 35 V DC at the transformer T1 31-33, M20/X9/7-8 and on D50/ + -. See Uroskop D wiring diagram page 12 and 17.
Replace the board D20C by another D20, error migrates?
Test the drive for mechanical sluggishness.
Check unit parameters, take the parameter set from the file with the highest number UROxxxxx.Pxx for the comparison (password _LABOR)
Voltage of the magnetic brake MB 51 at D50/X63/ + - and D21/20-24, nominal 26 V DC.
Magnetic brake lifts off?

Remedy:
Replace worn out drive belt, readjust Ref. switch S51 (software adjustment)
Set the belt tension by shifting the motor am50. The Ref. switch S51 must then be readjusted (software adjustment).
Possibly replace rectifier V3 in M20.
Possibly replace capacitor C3 in M20.
Replace board D20C.
Correct unit parameters.
Replace board D7.
Replace motor am51.
Replace board D21.

Host display B152

Error group E73

Description: The motor of the width diaphragm drive does not reach nominal speed

Test:
Check whether the idler pulleys of the drive belt rub in the spotfilm device cover.
Test drive belt for wear and correct tension.
Measure voltage 35 V DC at the transformer T1 31-33, M20/X9/13-14 and D50/ + -. See Uroskop D wiring diagram page 12 and 18.
Check unit parameters, take the parameter set from the file with the highest number UROxxxxx.Pxx for the comparison (password __LABOR)

Remedy:
Align spotfilm device cover, replace if necessary.
Replace drive belt if necessary.
Possibly replace rectifier V3 in M20.
Possibly replace capacitor C3 in M20.
Replace motor am52.
Correct unit parameters.
Replace board D7.

Host display B160

Error group E71

Description: No actual value changes on actuating the cassette transport drive.

Test:
Test fuse F6.
Replace board D20C by another D20, error migrates?
Measure voltage 35 V DC at transformer T1 31-33, M20/X9/5-6, D50/X62 +-.
Check LEDs on the board D7, V11 yellow, V12 green must light up on actuation. LED V13 red lights up at stop.
See Uroskop D wiring diagram page 12 and 17.
Test leads from D20C/X1730-32 to the motor am50 for short circuit

Remedy:
Replace fuse F6.
Replace board D20C.
Possibly replace rectifier V3 or capacitor C3 in M20.
Replace motor am50.
Replace spotfilm device controller D7.
Replace incremental encoder V50, see replacement instructions.
Replace cables.

Host display B161

Error group E72

Description: No actual value change on actuating the cassette clamping drive.

Test:
Test fuse F6.
Replace board D20C by another D20, error migrates?
Measure voltage 35 V DC at transformer T1 31-33, M20/X9/7-8, D50/X64 + -.
Check LEDs on the board D7, V20 yellow, V21 green must light up on actuation. LED V22 red lights up at stop.
See Uroskop D wiring diagram page 12 and 17.
Drive belt torn?
Test leads from D20C/X1/26-28 to the motor am51 for short circuit

Remedy:
Replace fuse F6.
Replace board D20C.
Possibly replace rectifier V3 or capacitor C3 in M20.
Replace motor am51.
Replace spotfilm device controller D7.
Replace drive belt, Ref. switch S51 must be adjusted (SW).
Replace incremental encoder V51, see replacement instructions.
Replace cables.

Host display B162

Error group E73

Description: No actual value change on actuating the width diaphragm drive.

Test:
Drive belt torn?
Test fuses F6 and F7.
Measure voltage 35 V DC at transformer T1/31-33, M20/X913-14 or D50/ + -.
See Uroskop wiring diagram page 12 and 18.
Check LEDs on the board D7, V23 yellow (width diaphragm opens), V24 green (width diaphragm closes).
Test leads from D7/B32-D32 to the motor am52 for short circuit

Remedy:
Replace fuse F6 or F7.
Replace board D7.
Replace motor am52.
Replace cables.

Host display B170

Error group E71

Description: Actual value change without actuating the cassette transport drive.

Test:
Replace board D20C by another D20, error migrates?
Check LEDs V11 yellow and V12 green on the board D7, should not light up without actuation.

Remedy:
Replace board D20C.
Replace board D7.

Host display B172

Error group E73

Description: Actual value change without actuating the width diaphragm drive.

Test: Replace board D20C by another D20, error migrates?
Check LEDs V20 yellow and V21 green on the board D7, should not light up without actuation.

Remedy: Replace board D20C.
Replace board D7.

Host display B181

Error group E74

Description: Reference switch S51 for clamping arm drive does not open.

Test: Check whether the switch is actuated in the search run, press loading button on the spotfilm device once for this.
Measure switch between 1 and 2 with ohmmeter while actuating by hand.

Remedy: Readjust reference switch S51.
Replace reference switch S51.

Host display B182

Error group E74

Description: Reference switch S52 for width diaphragm does not open.

Test: Check whether the switch is actuated in the search run, press loading button on the spotfilm device once for this.
Measure switch with ohmmeter while actuating by hand.

Remedy: Readjust reference switch S52.
Replace reference switch S52.

Host display B191

Error group E74

Description: Reference switch S51 for cassette clamping drive does not close.

Test: Test connections of the switch according to Uroskop D wiring diagram page 17.
Measure switch between 1 and 2 with ohmmeter while actuating by hand.

Remedy: Replace and readjust switch.

Host display B192

Error group **E74**

Description: Reference switch S52 for width collimator drive does not close.

Test: Test connections of the switch according to Uroskop D wiring diagram page 18.
Measure switch between C and CN with ohmmeter while actuating by hand.

Remedy: Replace and readjust switch.

Host display D200

Error group
Uroskop D1: E61
Uroskop D2/D3: E31

Description: Main control unit 1 does not report (M31A)
(Slave 0 does not report)

Test: Test LED displays of the main control unit 1.
KV and mAs display must be present.
Test cable connection M20/X31 to the console.
Test fuse M20/F16.

Remedy: Uroskop D1:
Bring cable connections into order.
Replace board D6 Com controller.
Uroskop D2/D3:
Bring cable connections into order.
Replace board D3 BBC.

Replace board D1 in the console.

Host display D201

Error group

Uroskop D1: E62
Uroskop D2/D3: E32

Description: Main control unit 2 does not report (M31B)
(Slave 1 does not report)

Test: Test LED displays of the main control unit 2.
KV and mAs display must be present.
Test cable connection M20/X31 to the console.
Test fuse M20/F15.

Remedy: Uroskop D1:
Bring cable connections into order.
Replace board D6 Com controller.

Uroskop D2/D3:
Bring cable connections into order.
Replace board D3 BBC.

Replace board D1 in the console.

Host display D203

Error group F80

Description: Memoskop does not report
Only Uroskop D2

Test: Test LED display on the Memoskop, all green LEDs must light up.
Test fuses in the Memoskop.
LED V3 (green) (+ 12V) on board D3 must light up.
Test power supply 230 V AC of the M20/X100.
(Test fuse F1 and F2 in M20).
Test plug connection Memoskop X6 - M20/D30
Is board D30 correctly plugged in?

Remedy: Replace possibly defective fuses.
Replace board D3 in the Memoskop if defective.
Repair plug connection Mem/X6.
Replace board D30/M20.
Replace board D3/M20.

Host display D204

Error group F80

Description: Hard disk in the Memoskop does not report
Only Uroskop D2

Test: Check plug connections to the hard disk.
When memory images are called, the LED of the hard disk must light up briefly.

Remedy: Bring plug connections into order.
Replace board D3.
Replace hard disk.

Host display D20D

Error group
Uroskop D1: E63
Uroskop D2/D3: E33

Description: Infrared receiver D3A not present
(Slave D does not report)

Test: Using service PC, check the configuration in the unit parameters -
Check connected DUEP-Slaves, Nominal IR foot switch = 01.
Check that board D3A is correctly plugged in.

Remedy: Correct configuration. (Nominal IR foot switch = 01)
Replace board D3A.
Uroskop D1: Replace board D.
Uroskop D2/D3: Replace board D3.

Host display D300

Error group

Uroskop D1: F64
Uroskop D2/D3: F34

Description: Infrared foot switch transmits function already on power up.

Test:
Test whether an object is lying on the foot switch.
Open foot switch, test microswitches for function.
Remove foot switch from the room, test LEDs V1/V2/V3 on board D3A, they must not light up.

Remedy:
Replace possibly defective microswitches.
Make the mechanism move smoothly, possibly replace parts.
Replace the foot switch completely.
Replace board D1 in the foot switch.
Replace board D3A.
Uroskop D1: Replace board D6.
Uroskop D2/D3: Replace board D3.

Host display D301

Error group

Uroskop D1: F65
Uroskop D2/D3: F35

Description: Infrared foot switch or receiver D3A defective.

Test:
Place IR receiver directly in front of the receiver and test.
Test transmit diodes on the foot switch for contamination.
LED displays on board D3A:
V1 and V2 must flash when the foot switch is activated.
V3 lights up when radiation is released by the foot switch.
If the LEDs are active, then the transmission path is in order.
Test batteries in the foot switch.

Remedy:
Clean IR foot switch.
Renew batteries.
Replace board D3A.
Uroskop D1: Replace board D6.
Uroskop D2/D3: Replace board D3.
Replace board D1 in the foot switch.
Replace IR foot switch completely.

Host display D302

Error group

Description: One-time reception error of the IR foot switch.

Test: Test foot switch with certain direct beam to the IR receiver.
Switch system off and on, let it boot, test foot switch.
Test board D3A for correct location.

Remedy: Possibly the foot switch-receiver path at the lifting base was shadowed and thus interrupted in operation.

Host display D303

Error group

Uroskop D1: E66
Uroskop D2/D3: E36

Description: Multiple (10x) reception error from the IR foot switch.

Test: Test transmission path for mechanical obstructions.
Test batteries in the foot switch.

Remedy: Replace batteries.
Ensure direct beam from the foot switch to the receiver.

Host display E101

Error group E81

Description: Hardware error on board D1 in the Memoskop.
Only Uroskop D1/D2

Test: Internal test routine in the Memoskop.

Remedy: Replace board D1 in the Memoskop.

Caution Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E102

Error group E81

Description: External RAM test error of the D1 processor in the Memoskop.
Only Uroskop D1/D2

Test: The RAMs are deleted during initialization, if this is not possible, the error is output.
External test not possible.

Remedy: Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E103

Error group E81

Description: Checksum test for the configuration byte wrong (board D1)
Only Uroskop D1/D2

Test: Check configuration
(see service instructions below)

Remedy: Perform configuration 50/60 Hz - 100 images.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E104

Error group E81

Description: Checksum error of Flash EPROM (board D1 Memoskop)
Only Uroskop D1/D2

Test: Test the status of the software in the download menu.
UROS.HEX
BILD.HEX
HARD.HEX Status should be up to date.

Remedy: With status different or not available, download the software UROS.HEX, BILD.HEX, HARD.HEX.
Replace board D1 in the Memoskop

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E105

Error group E82

Description: Board D2 in the Memoskop cannot be addressed.
Only Uroskop D1/D2

Test: Board D2 in the Memoskop plugged in correctly?

Remedy: Replace board D2.
Replace backplane board D5.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
Configuration 50/60 Hz and 100 images by keyboard)

Host display E106

Error group E82

Description: CPU 2 bus on board D2 defective.
Only Uroskop D1/D2

Test: Internal tests in the Memoskop show error.

Remedy: Replace board D2.
Replace backplane board D5.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E108

Error group E81

Description: Memoskop: Processor D1 Stack overflow
Only Uroskop D1/D2

Test: None.

Remedy: Replace board D1 in the Memoskop.
Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E109

Error group E81

Description: Image text loading checksum test not correct.
Only Uroskop D1/D2

Test: Was a text allocated to the image?
Check configuration 50/60 Hz.
Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz - 100 images by keyboard)

Remedy: Correct configuration.
Replace board D6.
Replace board D1 in the Memoskop.
Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E402

Error group E83

Description: No communication with CPU 2 after a reset.
Only Uroskop D1/D2

Test: Check that the boards D1 and D2 in the Memoskop are correctly plugged in.

Remedy: Replace board D2 in the Memoskop.
Replace backplane board D5.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E403

Error group E83

Description: Timeout during communication with CPU 2.
Only Uroskop D1/D2

Test: Test the status of the software in the download menu.
BILD.HEX
HARD.HEX
Status should be up to date.

Remedy: With status different or not available, download the software
BILD.HEX; HARD.HEX.
Replace board D2 in the Memoskop.
Replace backplane board D5 in the Memoskop.

Host display E404

Error group E83

Description: Error during polling of the CPU 2 version.
Only Uroskop D1/D2

Test: Test the status of the software in the download menu.
BILD.HEX
HARD.HEX
Status should be up to date.

Remedy: With status different or not available, download the software
BILD.HEX; HARD.HEX.
Replace board D2 in the Memoskop.
Replace backplane board D5 in the Memoskop.

Host display E601

Error group E84

Description: Text controller test faulty.
Only Uroskop D1/D2

Test: Internal test in the Memoskop.
No external test possible.

Remedy: Replace text controller D6.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E602

Error group E84

Description: Text controller for RAM test faulty.
Only Uroskop D1/D2

Test: Internal test in the Memoskop.
No external test possible.

Remedy: Replace text controller D6.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E610

Error group E85

Description: Keyboard interface test baud rate too low.
Only Uroskop D1/D2

Test: None.

Remedy: Replace keyboard of the Memoskop.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E611

Error group E85

Description: Keyboard interface test baud rate too high.

Test: None.

Remedy: Replace keyboard of the Memoskop.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E612

Error group E85

Description: Keyboard interface test baud clock missing.
Only Uroskop D1/D2

Test: None.

Remedy: Replace keyboard or keyboard cable of the Memoskop.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E620

Error group E85

Description: Keyboard interface test, feedback error.
Only Uroskop D1/D2

Test: None.

Remedy: Replace keyboard or keyboard cable of the Memoskop.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E621

Error group E85

Description: Keyboard interface test feedback timeout.

Test: None.

Remedy: Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E710

Error group

Description: Memoskop BAS Sync test: Periods of the H sync signal too long.
Only Uroskop D1/D2

Test: Test connections from the transformer T1 to the plug D1/X13.
Test fuses F2; F3; F4; F5.

Remedy: Replace defective fuses.
Bring connections from the transformer T1 to the plug D1/X13 into order.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E711

Error group

Description: Memoskop BAS Sync. test: Periods of the H sync signal too short.
Only Uroskop D1/D2

Test: Test connections from the transformer T1 to the plug D1/X13.
Test fuses F2; F3; F4; F5.

Remedy: Replace defective fuses.
Bring connections from the transformer T1 to the plug D1/X13 into order.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E712

Error group

Description: Memoskop BAS Sync. test: H sync signal missing.

Test: Test connections from the transformer T1 to the plug D1/X13.
Test fuses F2; F3; F4; F5.

Remedy: Replace defective fuses.
Bring connections from the transformer T1 to the plug D1/X13 into order.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E720

Error group

Description: Memoskop BAS Sync. test: Periods of the 50Hz VR sync. too long.
Only Uroskop D1/D2

Test: Test connections from the transformer T1 to the plug D1/X13.
Test fuses F2; F3; F4; F5.

Remedy: Replace defective fuses.
Bring connections from the transformer T1 to the plug D1/X13 into order.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E721

Error group

Description: Memoskop BAS Sync. test: Periods of the 50Hz VR sync. too short.
Only Uroskop D1/D2

Test: Test connections from the transformer T1 to the plug D1/X13.
Test fuses F2; F3; F4; F5.

Remedy: Replace defective fuses.
Bring connections from the transformer T1 to the plug D1/X13 into order.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E722

Error group

Description: Memoskop BAS Sync. test: Periods of the 60Hz VR sync. signal too long.
Only Uroskop D1/D2

Test: Test connections from the transformer T1 to the plug D1/X13.
Test fuses F2; F3; F4; F5.

Remedy: Replace defective fuses.
Bring connections from the transformer T1 to the plug D1/X13 into order.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E723

Error group:

Description: Memoskop BAS Sync. test: Periods of the 60 Hz VR sync. too short.
Only Uroskop D1/D2

Test: Test connections from the transformer T1 to the plug D1/X13.
Test fuses F2; F3; F4; F5.

Remedy: Replace defective fuses.
Bring connections from the transformer T1 to the plug D1/X13 into order.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display

E724

Error group

Description: Memoskop BAS Sync. test: VR sync. missing.
Only Uroskop D1/D2

Test: Test connections from the transformer T1 to the plug D1/X13.
Test fuses F2; F3; F4; F5.

Remedy: Replace defective fuses.
Bring connections from the transformer T1 to the plug D1/X13 into order.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display

E730

Error group

Description: Memoskop BAS Sync. test: H sync. level error
Only Uroskop D1/D2

Test: Test connections from the transformer T1 to the plug D1/X13.
Test fuses F2; F3; F4; F5.

Remedy: Replace defective fuses.
Bring connections from the transformer T1 to the plug D1/X13 into order.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E731

Error group

Description: Memoskop BAS Sync. test: PLL lock error.
Only Uroskop D1/D2

Test: Test connections from the transformer T1 to the plug D1/X13.
Test fuses F2; F3; F4; F5.

Remedy: Replace defective fuses.
Bring connections from the transformer T1 to the plug D1/X13 into order.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E740

Error group

Description: Memoskop BAS Sync. test: VR interrupt missing.

Test: Test connections from the transformer T1 to the plug D1/X13.
Test fuses F2; F3; F4; F5.

Remedy: Replace defective fuses.
Bring connections from the transformer T1 to the plug D1/X13 into order.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Host display E750

Error group

Description: Memoskop BAS Sync. test: Wrong call-up parameter.
Only Uroskop D1/D2

Test: Uroskop D1: Pixel clock of the TV system.
Uroskop D2: Check BAS signal of the TV system.

Remedy: Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images by keyboard)

Uroskop D1:
Replace camera head of the Videomed DI.
Uroskop D2:
Replace Videomed N1 VV board,
Replace I board.

Host display E800

Error group

Description: Memoskop voltage test: ADC reference voltage too high.
Only Uroskop D1/D2

Test: None.

Remedy: Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display E801

Error group

Description: Memoskop voltage test: ADC reference voltage too low.
Only Uroskop D1/D2

Test: None.

Remedy: Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display E810

Error group

Description: Memoskop voltage test: VPP min voltage too high.
(Programming voltage for Flash EPROMS)
Only Uroskop D1/D2

Test: None.

Remedy: Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display E811

Error group

Description: Memoskop voltage test: VPP min voltage too low.
Only Uroskop D1/D2

Test: None.

Remedy: Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display E812

Error group

Description: Memoskop voltage test: VPP max. voltage too high.
Only Uroskop D1/D2

Test: None.

Remedy: Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display E813

Error group

Description: Memoskop voltage test: VPP max voltage too low.
Only Uroskop D1/D2

Test: None.

Remedy: Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display E814

Error group

Description: Memoskop voltage test: VPP voltage not present.
Only Uroskop D1/D2

Test: Test fuses in the Memoskop.

Remedy: Replace defective fuse.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display E820

Error group

Description: Memoskop voltage test: Voltage 5 V analog too high (> 6 V)
Only Uroskop D1/D2

Test: LED +5 V in the Memoskop must light up with normal brightness.

Remedy: Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display E821

Error group

Description: Memoskop voltage test: Voltage 5 V analog too low (< 4 V)
Only Uroskop D1/D2

Test: Test LED display on the Memoskop, LED +5 V (green) must light up.
Test fuse F3 in the Memoskop.
Test connections X13 in the Memoskop.

Remedy: Replace possibly defective fuse.
Correct connections X13 in the Memoskop.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display E830

Error group

Description: Memoskop voltage test: Voltage -5.2 V too high.
Only Uroskop D1/D2

Test: LED -5 V2 in the Memoskop must light up with normal brightness.
Test connections X13 in the Memoskop.

Remedy: Correct connections X13.
Replace board D1 in the Memoskop

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60Hz and 100 images)

Host display E831

Error group

Description: Memoskop voltage test: Voltage -5,2V too low.
Only Uroskop D1/D2

Test: Test fuse F4 in the Memoskop.

Remedy: Replace fuse F4 in the Memoskop.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display E840

Error group

Description: Memoskop voltage test: Voltage VEE analog -5 V too high
Only Uroskop D1/D2

Test: None.

Remedy: Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display E841

Error group

Description: Memoskop voltage test: Voltage VEE analog -5 V too low
Only Uroskop D1/D2

Test: Test LED VEE (green) on the Memoskop, it must light up.
Test fuse F5 in the Memoskop.
(No longer any monitor synchronization.)

Remedy: Replace fuse F5.
Replace board D1 in the Memoskop.

Caution: Observe service note RLL5-310.076.xx.xx.xx.
(Configuration 50/60 Hz and 100 images)

Host display EC14

Error group

Description: Memoskop data checksum error during the download.
Only Uroskop D1/D2

Test: Test power supply of the Memoskop.
Test LED display on the Memoskop.
Test service PC host/D1 connection.

Remedy: Ensure power supply of the Memoskop (mains fuse F1).
Attempt download once again.
Replace host board D1 in the Uroskop.

Host display EC21

Error group

Description: Memoskop not ready for download.
Only Uroskop D1/D2

Test: Test power supply of the Memoskop.
Test LED display on the Memoskop.
Test service PC host/D1 connection.

Remedy: Ensure power supply of the Memoskop (main fuse F1).
Attempt download once again.
Replace host board D1 in the Uroskop.

Host display EF05

Error group E88

Description:
Memoskop interface: Acquisition signal present without acquisition started.
Only Uroskop D2

Test: Test connection from board M20/D30 to the Memoskop X6.

Remedy: Replace defective cable.
Replace board D30 in the Uroskop.
Replace host board D1 in the Uroskop.

Host display EF06

Error group E88

Description: Memoskop interface: Acquisition already active before requested.
Only Uroskop D2

Test:

Remedy:

Host display EF07

Error group E86

Description: Memoskop interface: Acquisition timeout with fluoroscopy.
Only Uroskop D2

Test:

Remedy:

Host display EF08

Error group E87

Description: Memoskop interface: Acquisition timeout with digital radiography.
Only Uroskop D2

Test:

Remedy:

Host display EF60

Error group E86

Description: Memoskop interface: Acquisition active during fluoroscopy pause.
Only Uroskop D1

Test:

Remedy:

Host display EF70

Error group E86

Description: Memoskop interface: Acquisition timeout with fluoroscopy.
Only Uroskop D1

Test:

Remedy:

Host display EF80

Error group E87

Description: Memoskop interface: Acquisition timeout for ready/stop signal from the Memoskop.
Only Uroskop D1

Test:

Remedy:

Host display F800

Error group

Description: Host (Uroskop board D1): Watchdog test faulty

Test: None.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F801

Error group

Description: Host (Uroskop board D1): RAM test faulty

Test: Internal test.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F802

Error group

Description: Host (Uroskop board D1): Battery is empty.

Test: Measure voltage of the battery, no-load voltage should be 3.6 V.
Test points M20/D1/x18 - x19 host board.

Remedy: Replace battery.

Host display F803

Error group

Description: Host (Uroskop board D1): Test of the serial interface 1 faulty

Test: Internal test sequence.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F804

Error group

Description: Host (Uroskop board D1): Test of the serial interface 2 faulty

Test: Internal test.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F805

Error group

Description: Host (Uroskop board D1): Test of the serial interface 1 faulty

Test: Internal test sequence.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F806

Error group

Description: Host (Uroskop board D1): Test of the serial interface 2 faulty

Test: Internal test sequence.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F807

Error group

Description: Host (Uroskop board D1): Test of the internal timer 0 faulty

Test: Internal test sequence.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F808

Error group

Description: Host (Uroskop board D1): Test of the internal timer 1 faulty

Test: Internal test sequence.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F809

Error group

Description: Host (Uroskop board D1): Test of the internal timer 2 faulty

Test: Internal test sequence.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F80A

Error group

Description: Host (Uroskop board D1): Test of the internal timer 3 faulty

Test: Internal test sequence.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F80B

Error group

Description: Host (Uroskop board D1): Test of the internal timer 4 faulty

Test: Internal test sequence.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F80C

Error group

Description: Host (Uroskop board D1): Test of the internal timer 5 faulty

Test: Internal test sequence.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F80D

Error group

Description: Host (Uroskop board D1): No Flash EPROM can be addressed.

Test: None.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F80E

Error group

Description: Host (Uroskop board D1): Checksum of the EPROM faulty

Test: None.

Remedy: Download the host software (Uros.Hex).
Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F80F

Error group

Description: Host (Uroskop board D1): Initialization error of the watchdog counter.

Test: None.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F810

Error group

Description: Host (Uroskop board D1): EEPROM was written too often.

Test: On download of the host software, the EEPROMs were indeed deleted, but can no longer be written.

Remedy: Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Host display F811

Error group

Description: Host (Uroskop board D1): System was not initialized

Test: No booting of the basic unit after switching on.

Remedy: Download the host software (Uros.Hex).
Replace host board D1 in the Uroskop.
(Test DIP switches, jumpers, firmware, download UROS.HEX.)

Polydoros LX - Videomed DI - XCS error listing

The errors of the Polydoros LX, XCS, Videomed DI system components are displayed as follows in the KV, mAs and film density display on the main control unit:

KV display	ERR
mAS display	Error number
Film density display	AP code (only Uroskop D1/PL LX) (AP code designates component Vid.Di; PL 2x etc.)

Since no display of the exposure time is implemented in the Uroskop D main control console, the AP code is converted into a hex number and displayed on the display of the film density correction of the Iontomat (max. 3 digits available).

Please refer to the technical documentation of the relevant components for the detailed description of these errors.

These components can be reinitialized by briefly pressing the precontact of the exposure release switch without having to shut down the entire system.

AP: F1 ERR: **07** Service-PC turned off

VIDEOMED DI TV System

AP: 10	ERR: **07**	TV-system not active or turned off
AP: 10	ERR: **801**	RAM DAC Error
AP: 10	ERR: **802**	Gamma correction error
AP: 10	ERR: **803**	Peltier error
AP: 10	ERR: **804**	Theta warning
AP: 10	ERR: **851**	Pulse generator error
AP: 10	ERR: **852**	V-pulse reset error
AP: 10	ERR: **853**	ACT-value error
AP: 10	ERR: **854**	AGC error (automatic gain control)
AP: 10	ERR: **855**	Faulty power supply 5 V digital
AP: 10	ERR: **856**	Faulty power supply + 5 V analog
AP: 10	ERR: **857**	Faulty power supply -5 V analog
AP: 10	ERR: **858**	Faulty power supply 13 V
AP: 10	ERR: **859**	Faulty power supply K voltage
AP: 10	ERR: **860**	Faulty power supply 8 V
AP: 10	ERR: **861**	Camera head DC error
AP: 10	ERR: **862**	Camera head AC error
AP: 10	ERR: **875**	Checksum error

POLYDOROS LX Generator

FILAMENT HEATING

AP: 50	ERR:	**000**	Invalid init data
AP: 50	ERR:	**007**	Generator turn off
AP: 50	ERR:	**119**	Timeout heating
AP: 50	ERR:	**120**	No acknowledge during send
AP: 50	ERR:	**121**	No acknowledge during receive
AP: 50	ERR:	**122**	Overflow input buffer
AP: 50	ERR:	**123**	Invalid answer
AP: 50	ERR:	**401**	Timeout of ADC
AP: 50	ERR:	**402**	Heating current at min
AP: 50	ERR:	**403**	Tube current during acquisition at max
AP: 50	ERR:	**404**	Tube current during fluoro at max
AP: 50	ERR:	**410**	Timeout of processor timer
AP: 50	ERR:	**413**	Desired tube current above limit
AP: 50	ERR:	**421**	Heating at max for tube current control (Fluoro)
AP: 50	ERR:	**425**	Faulty -15 V voltage supply on D220
AP: 50	ERR:	**426**	Faulty 15 V voltage supply on D220
AP: 50	ERR:	**427**	Faulty 15 V digital voltage supply on D220
AP: 50	ERR:	**428**	Faulty 24 V voltage supply on D220
Ap: 50	ERR:	**433**	Current in F1 above limit
AP: 50	ERR:	**434**	Current in F0 above limit

IONTOMAT

AP: 50	ERR:	**510**	Invalid Iontomat selection
AP: 50	ERR:	**511**	Invalid tomo time selection
AP: 50	ERR:	**512**	Function blocked by dose supervision
AP: 50	ERR:	**550**	Function blocked by dose supervision

POWERSECTION of Generator

AP: 50	ERR: **600**	Faulty + 15 V voltage supply
AP: 50	ERR: **601**	Faulty -15 V voltage supply
AP: 50	ERR: **602**	No feedback from power solenoid
AP: 50	ERR: **603**	No feedback from capacitor load solenoid
AP: 50	ERR: **604**	ZK-Voltage below 400 Volt
AP: 50	ERR: **605**	ZK-Voltage above 630 Volt
AP: 50	ERR: **606**	Invalid range feedback
AP: 50	ERR: **608**	No feedback from high voltage switch (oil)
AP: 50	ERR: **628**	Door contact is open
AP: 50	ERR: **633**	Voltage greater than 2 kV
AP: 50	ERR: **666**	Jumper X44 on D100 still connected
AP: 50	ERR: **688**	Timeout for brightness adjust signal
AP: 50	ERR: **711**	Short circuit in main transformer
AP: 50	ERR: **712**	kV max +
AP: 50	ERR: **713**	kV max -
AP: 50	ERR: **714**	kV min +
AP: 50	ERR: **715**	kV min -
AP: 50	ERR: **803**	Short in starter
AP: 50	ERR: **805**	No current in main line (no ROT)
AP: 50	ERR: **810**	No feedback from starter solenoid

XCU - ERRORS

AP: F0	ERR: **007**	Component turn off
AP: F0	ERR: **008**	System selection and tube position mismatching

XCU-ERRORS - IMAGE INTENSIFIER AND TV

AP: F0	ERR: **101**	Invalid telegram parameter
AP: F0	ERR: **107**	No function available for telegram received
AP: F0	ERR: **120**	Error during receiving telegram

XCU-ERRORS RADIATION Production

AP: F0	ERR: **250**	Calling operating system routine failed
AP: F0	ERR: **251**	Error during initializing telegram reception
AP: F0	ERR: **252**	Error during receiving telegram
AP: F0	ERR: **253**	error sending telegram
AP: F0	ERR: **254**	No function available for telegram received
AP: F0	ERR: **255**	Invalid telegram parameter
AP: F0	ERR: **260**	Invalid configuration data
AP: F0	ERR: **261**	Internal software error
AP: F0	ERR: **270**	Acquisition blocked
AP: F0	ERR: **271**	Preparation of acquisition not possible
AP: F0	ERR: **272**	Acquisition blocked due to limit
AP: F0	ERR: **273**	X-ray blocked
AP: F0	ERR: **274**	Preparation of x-ray not possible
AP: F0	ERR: **275**	Active tube is not selected tube
AP: F0	ERR: **276**	Internal software error

SYSTEM SELECTION

AP: F0	ERR: **320**	Invalid telegram number
AP: F0	ERR: **321**	Too many parameters in received telegram
AP: F0	ERR: **322**	Default system number too large
AP: F0	ERR: **323**	Internal system call failed
AP: F0	ERR: **324**	Timer could not start
AP: F0	ERR: **325**	Timer could not be reset
AP: F0	ERR: **326**	IPC send failed
AP: F0	ERR: **327**	AP-ID is not in configuration
AP: F0	ERR: **328**	Invalid timeout message

ORGANSELECTION

AP: F0	ERR: **350**	Internal system call failed
AP: F0	ERR: **351**	Error during initializing telegram reception
AP: F0	ERR: **352**	Error during receiving telegram
AP: F0	ERR: **353**	Error sending telegram
AP: F0	ERR: **354**	No function available for telegram received
AP: F0	ERR: **355**	Invalid telegram parameter
AP: F0	ERR: **356**	Internal software error (creating alarm time)
AP: F0	ERR: **357**	Internal software error (deleting alarm time)
AP: F0	ERR: **358**	Internal software error (no free memory)
AP: F0	ERR: **359**	No more memory for storing organ program
AP: F0	ERR: **360**	Invalid configuration data
AP: F0	ERR: **361**	Internal software error (invalid function parameter)
AP: F0	ERR: **370**	Error writing to EEPROM

ACQUISITION ROUTINE

AP: F0	ERR: **401**	Invalid telegram parameter
AP: F0	ERR: **407**	No function available for telegram received
AP: F0	ERR: **420**	Acquisition terminated by component or turn off
AP: F0	ERR: **421**	Error during receiving telegram

FLUOROSCOPY ROUTINE

AP: F0	ERR: **451**	Invalid telegram parameter
AP: F0	ERR: **452**	Invalid configuration data
AP: F0	ERR: **457**	NO function available for telegram received
AP: F0	ERR: **470**	Invalid function code in telegram received
AP: F0	ERR: **476**	Error sending telegram
AP: F0	ERR: **477**	Error during receiving telegram

SERVICE

AP: F0	ERR:	**552**	Init block send for unknown component
AP: F0	ERR:	**570**	Error copying data to EEPROM
AP: F0	ERR:	**571**	Invalid length of init block 3
AP: F0	ERR:	**572**	Error copying data to EEPROM
AP: F0	ERR:	**573**	Invalid length of init block 56
AP: F0	ERR:	**574**	Invalid length of init block 57 - 64
AP: F0	ERR:	**575**	Error copying data to EEPROM
AP: F0	ERR:	**576**	Invalid length of init block 65
AP: F0	ERR:	**577**	Error copying data to EEPROM
AP: F0	ERR:	**578**	Invalid length of init block 4
AP: F0	ERR:	**579**	Error copying data to EEPROM
AP: F0	ERR:	**580**	Invalid length of init block 5
AP: F0	ERR:	**581**	Error copying data to EEPROM
AP: F0	ERR:	**582**	Invalid length of init block 6 - 15
AP: F0	ERR:	**583**	Error copying data to EEPROM
AP: F0	ERR:	**584**	Invalid length of init block 18 - 29
AP: F0	ERR:	**585**	Error copying data to EEPROM
AP: F0	ERR:	**586**	Invalid length of init block 46
AP: F0	ERR:	**587**	Error copying data to EEPROM
AP: F0	ERR:	**588**	Invalid length of init block 47
AP: F0	ERR:	**589**	Error copying data to EEPROM
AP: F0	ERR:	**590**	Invalid length of init block 48
AP: F0	ERR:	**591**	Error copying data to EEPROM
AP: F0	ERR:	**592**	Invalid length of init block 49
AP: F0	ERR:	**593**	Error copying data to EEPROM
AP: F0	ERR:	**594**	Invalid length of init block 51
AP: F0	ERR:	**595**	Error copying data to EEPROM
AP: F0	ERR:	**596**	Invalid length of init block 54
AP: F0	ERR:	**597**	Error copying data to EEPROM
AP: F0	ERR:	**598**	Invalid length of init block 55
AP: F0	ERR:	**599**	Error copying data to EEPROM
AP: F0	ERR:	**600**	Invalid length of init block 50
AP: F0	ERR:	**601**	Error copying data to EEPROM
AP: F0	ERR:	**602**	Error writing init block 1 to EEPROM

TDRX 1 / Schlee
TDRX6 / Fleischter
AUT98 / Hay